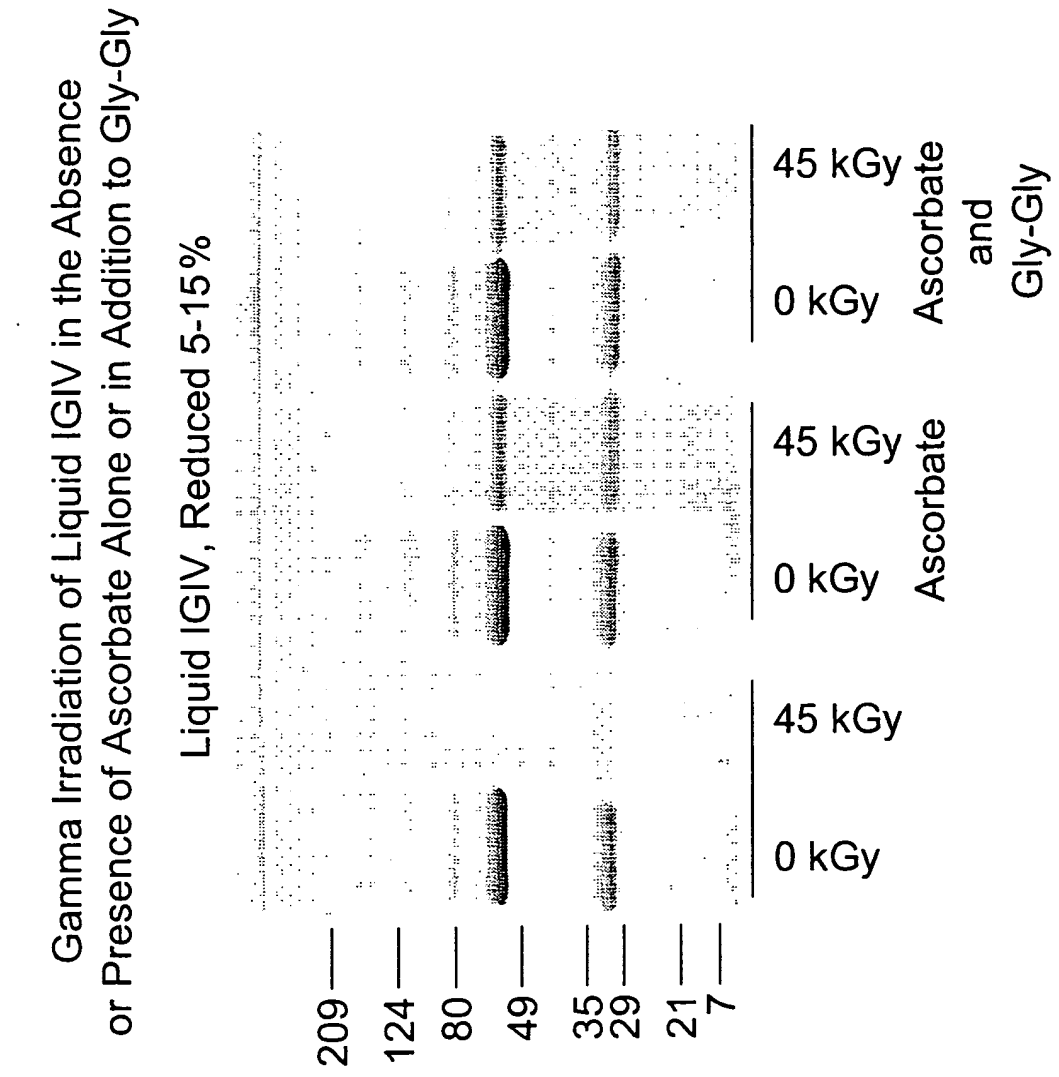


FIG. 1A

Gamma Irradiation of Liquid IGIV in the Absence or Presence of Ascorbate Alone or in Addition to Gly-Gly

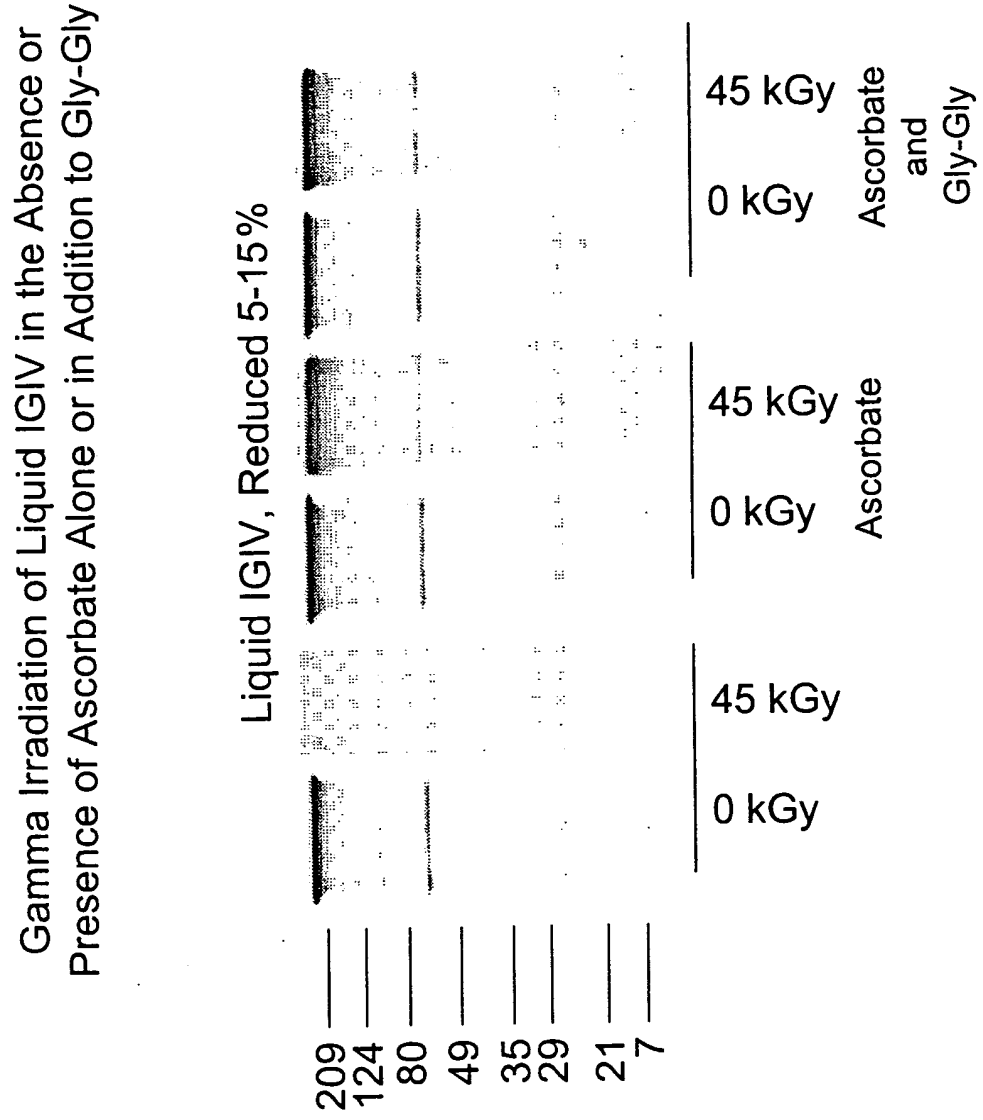


FIG. 1B

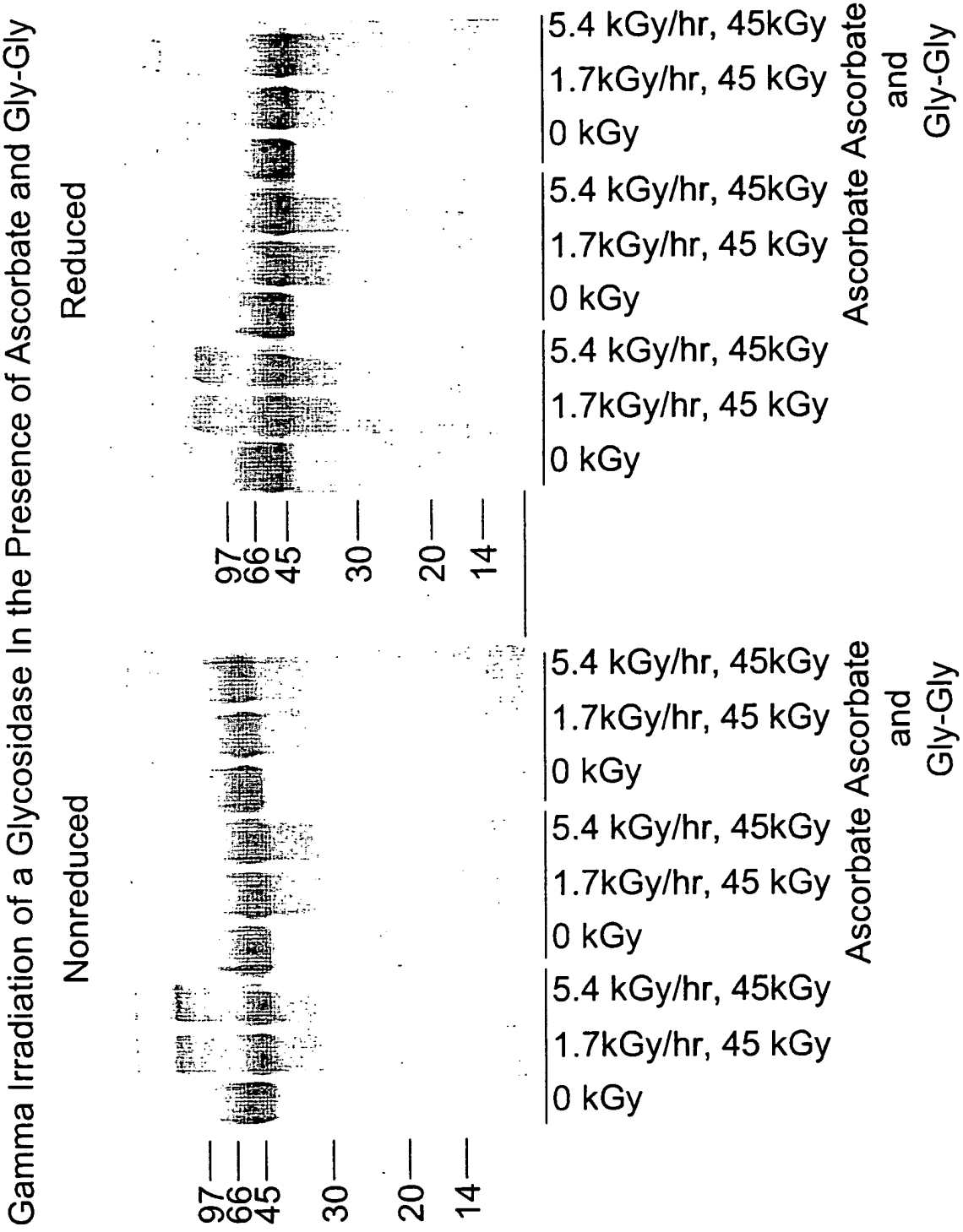


FIG. 2B

FIG. 2A

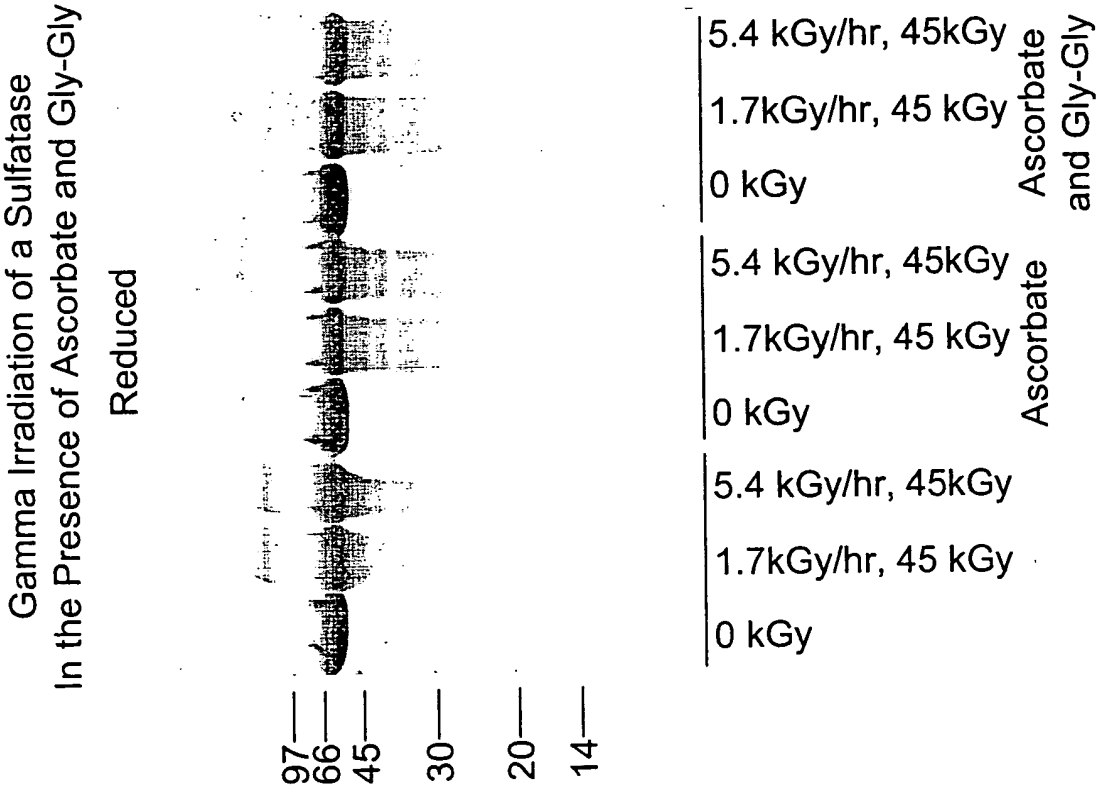


FIG. 3

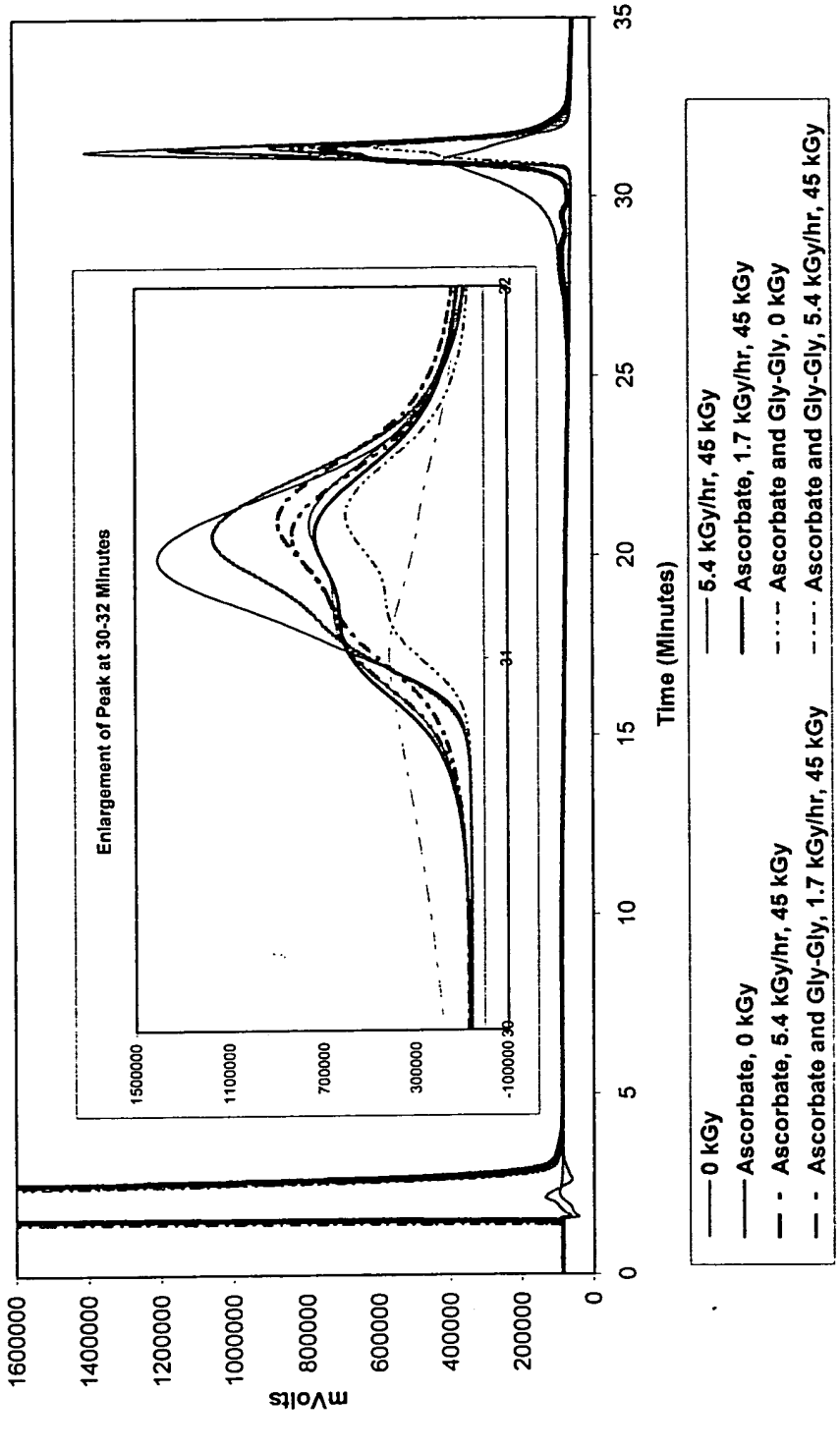


FIG. 4

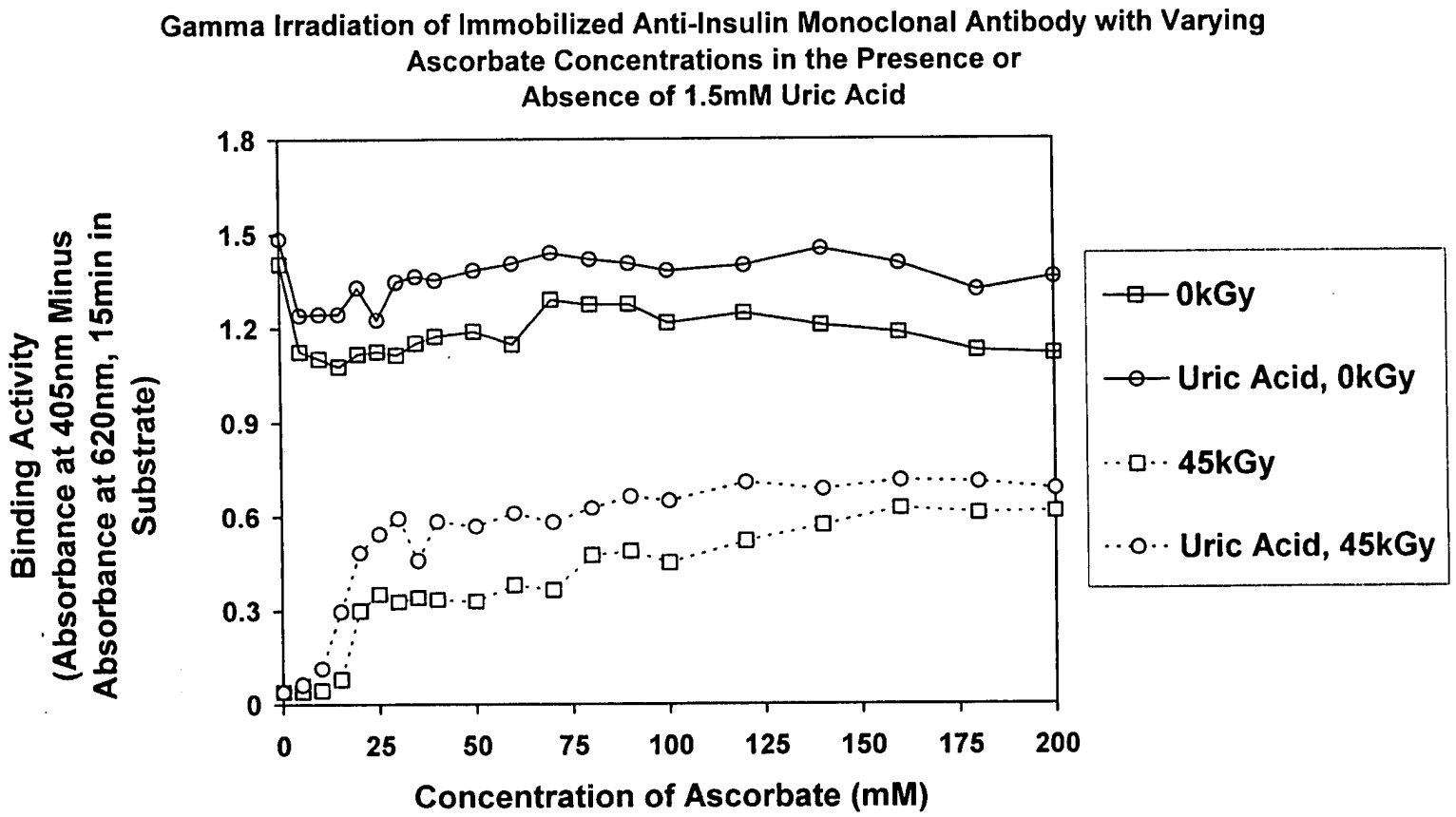


FIG. 5

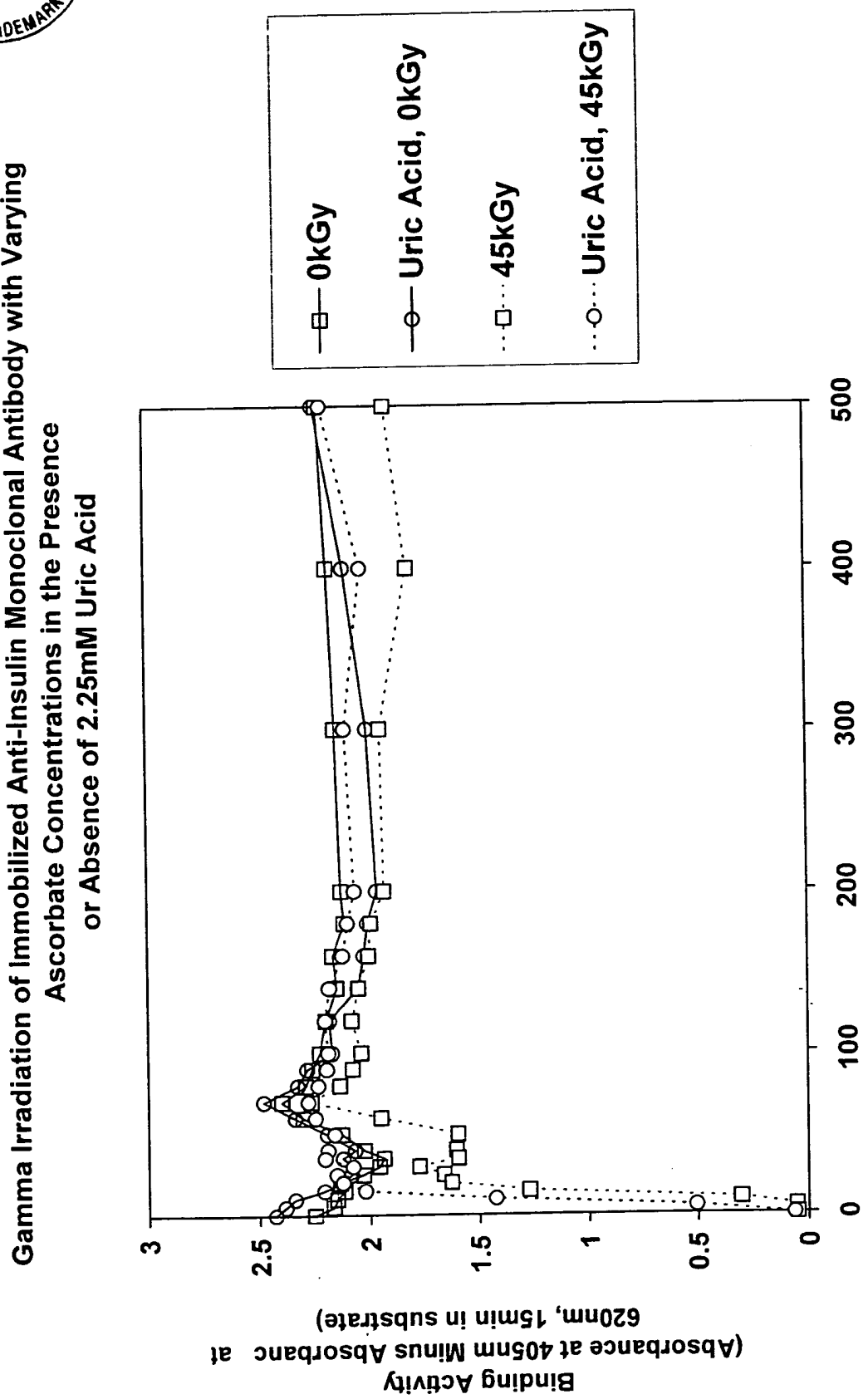


FIG. 6A

Gamma Irradiation of a Lyophilized Galactosidase
In the Absence of Stabilizers

Reduced & Non-Reduced, 10%

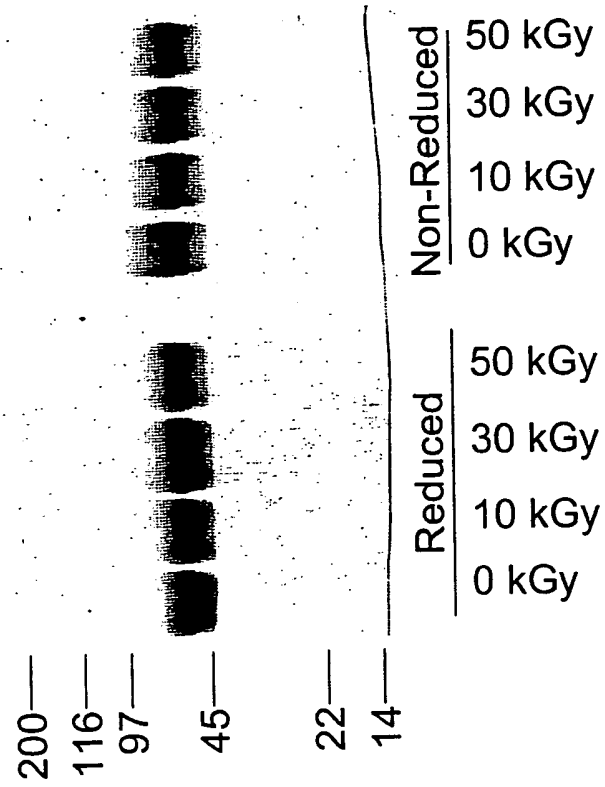


FIG. 6B

Gamma Irradiation of a Lyophilized Galactosidase In the Presence of 200mM Ascorbate

Reduced & Non-Reduced, 10%

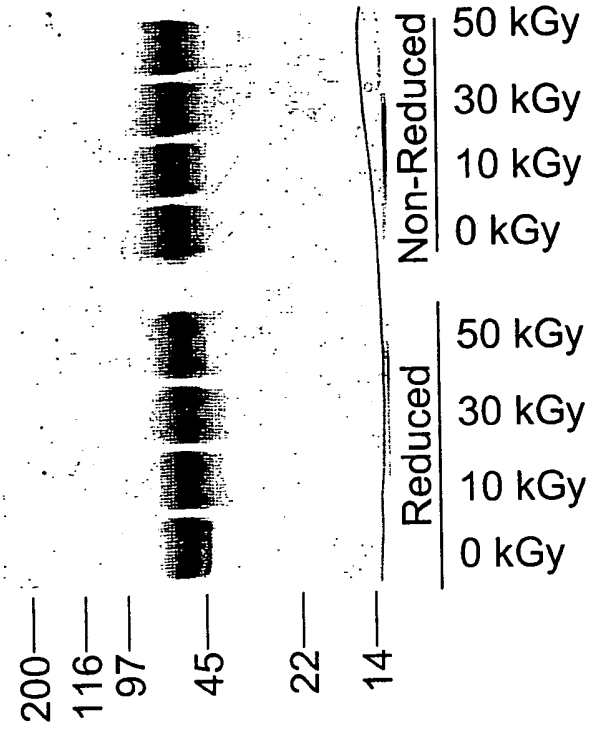


FIG. 6C

Gamma Irradiation of a Lyophilized Galactosidase In the Presence of 200mM Ascorbate and 200mM Gly-Gly

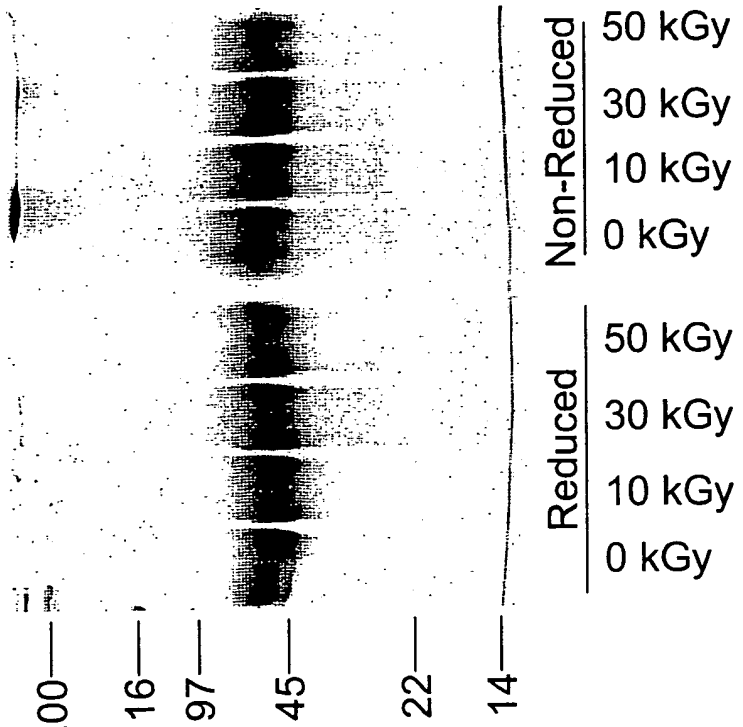


FIG. 7A

Gamma Irradiation of a Galactosidase in the Absence or Presence of Ascorbate Alone or in Combination with Gly-Gly

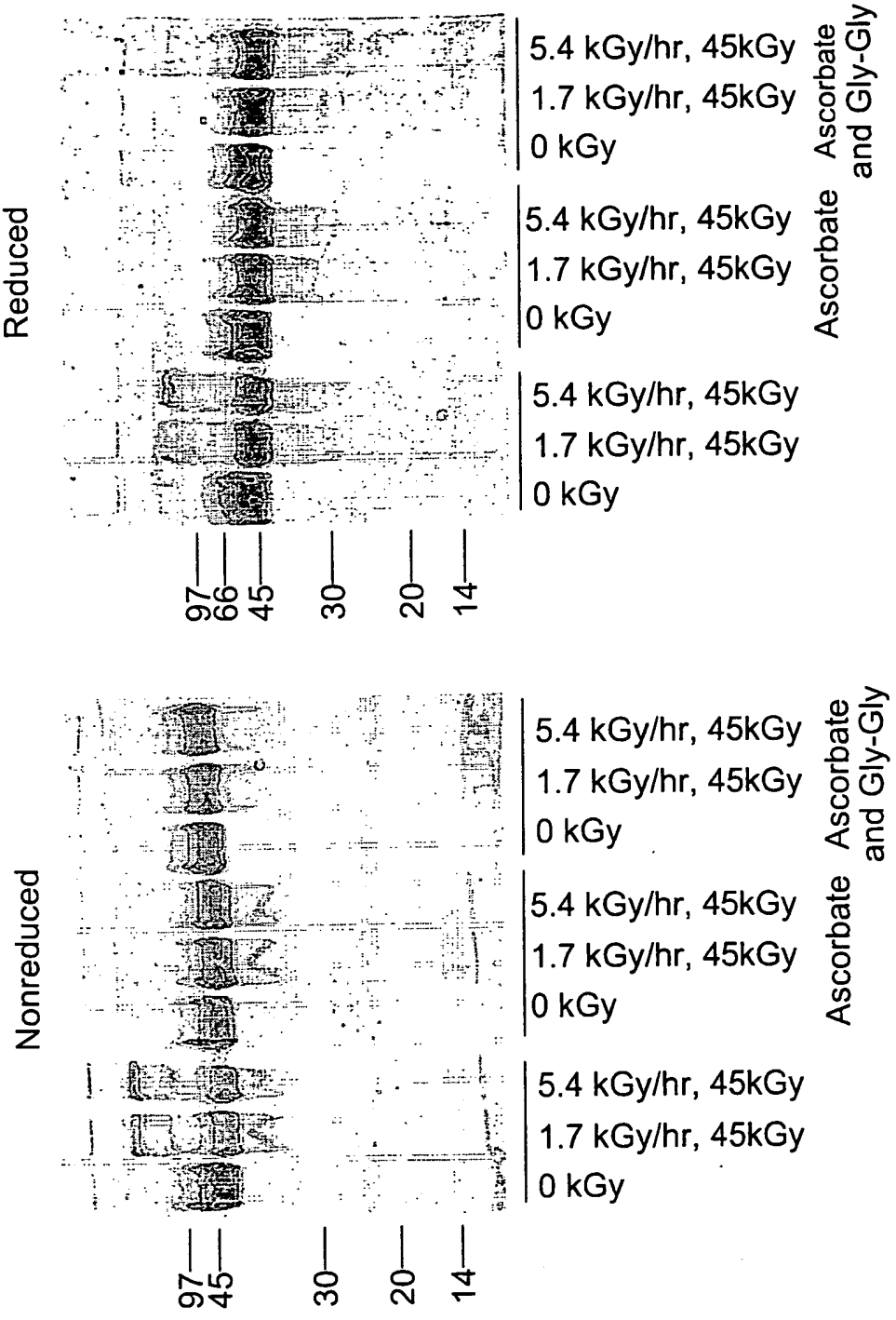


FIG. 7B

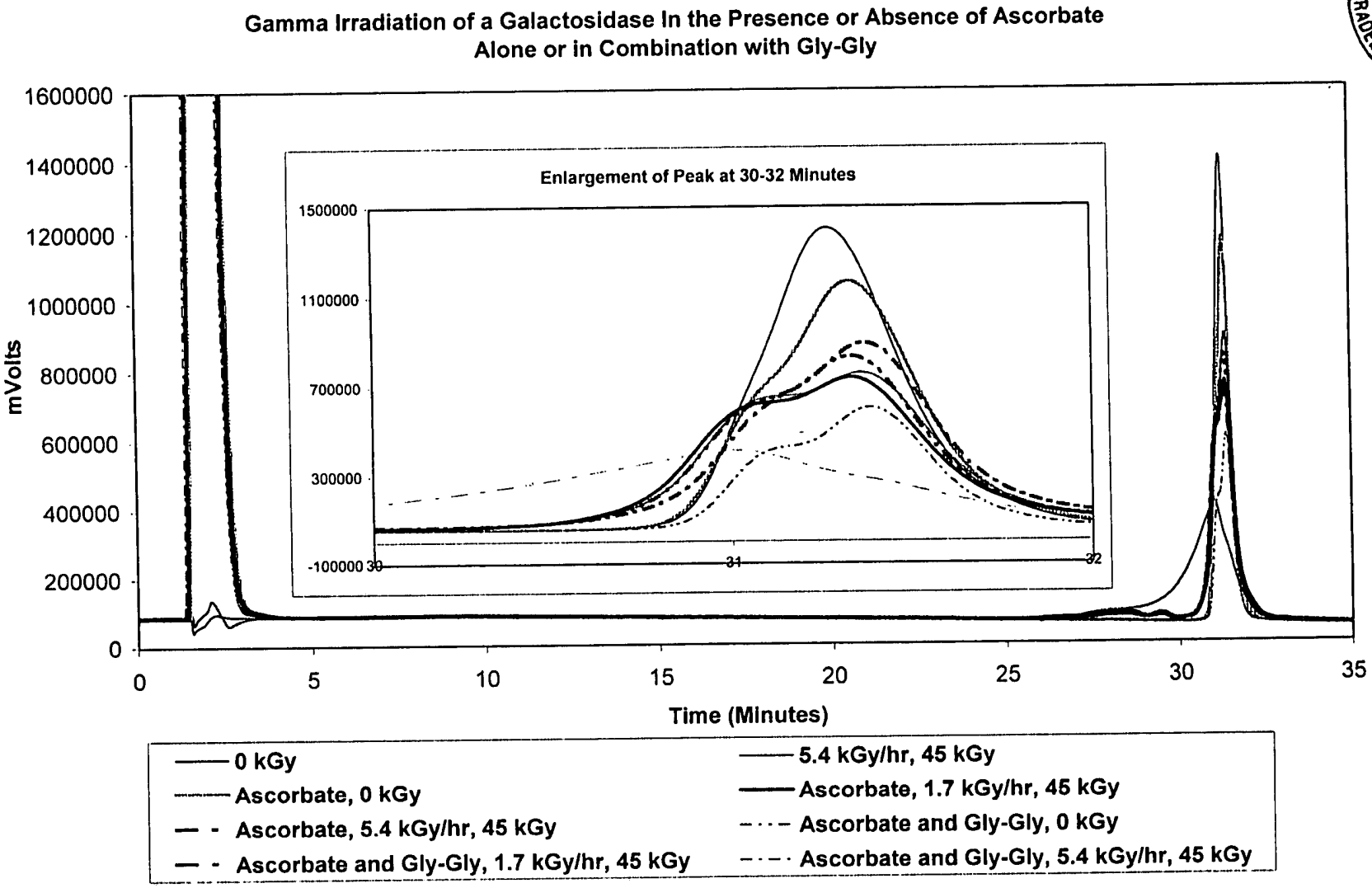


FIG. 8

Gamma Irradiation of a Lyophilized Galactosidase in the Absence and Presence of 100 mM Ascorbate

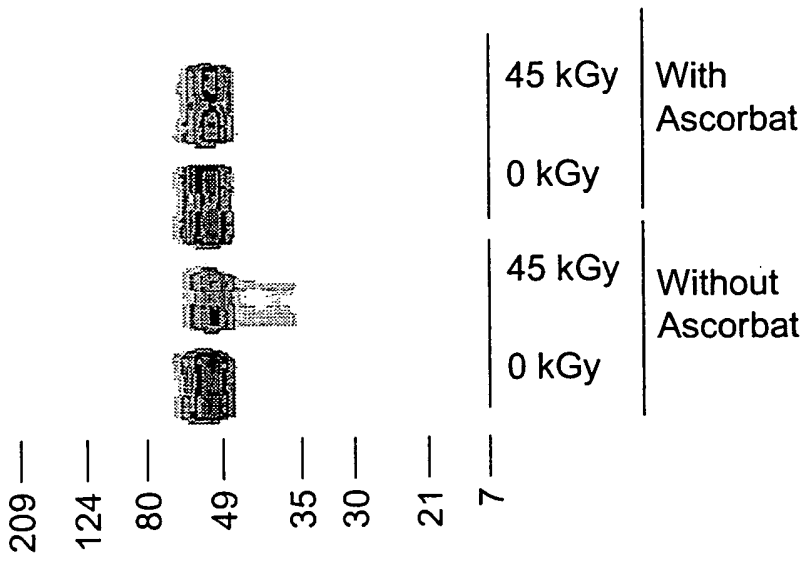


FIG. 9

Gamma Irradiation of a Lyophilized Galactosidase
In the Absence of Stabilizers

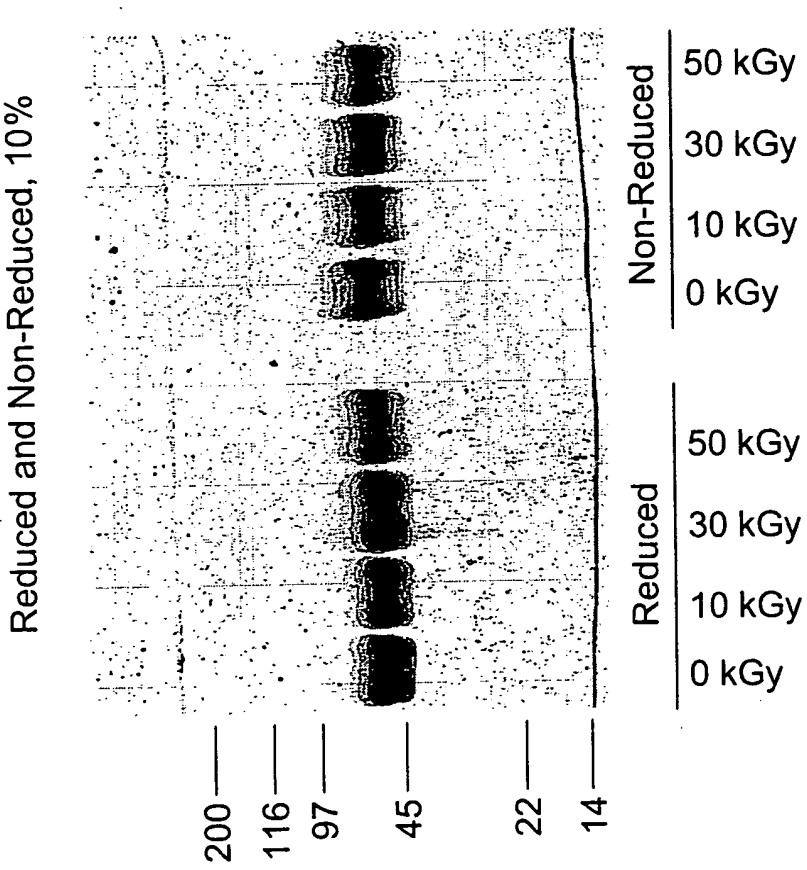


FIG. 10A

Gamma Irradiation of a Lyophilized Galactosidase In the Presence of 200mM Ascorbate and 200mM Gly-Gly

Reduced and Non-Reduced, 10%

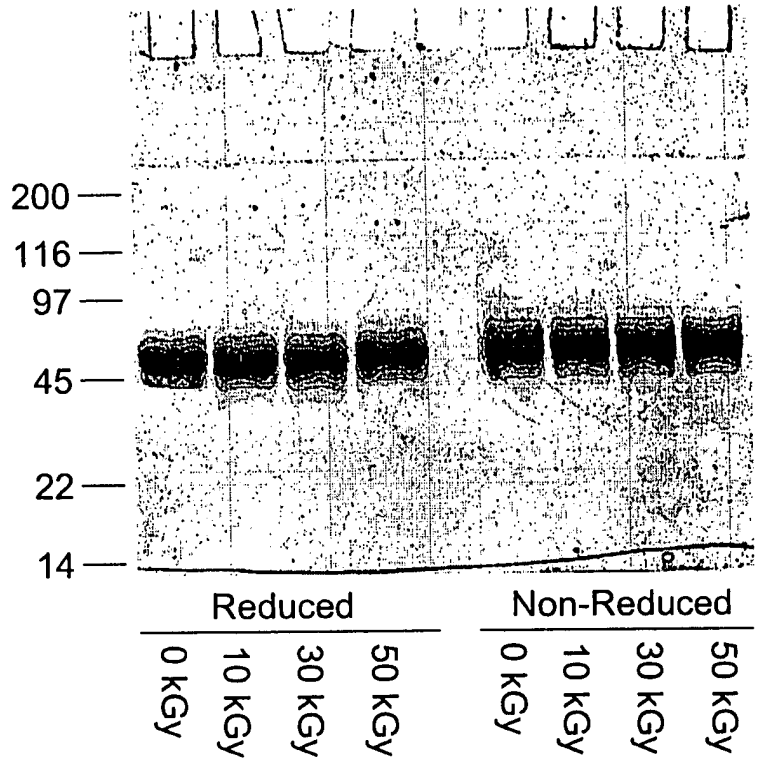


FIG. 10B

Gamma Irradiation of a Lyophilized Galactosidase In the Presence of 200mM Ascorbate and 200mM Gly-Gly

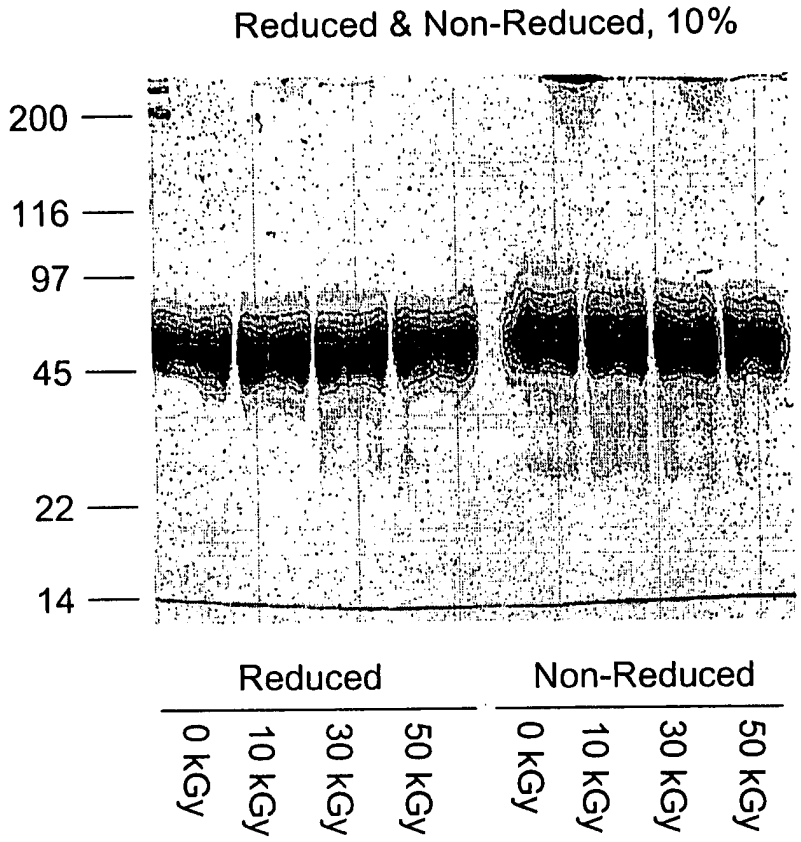


FIG. 10C

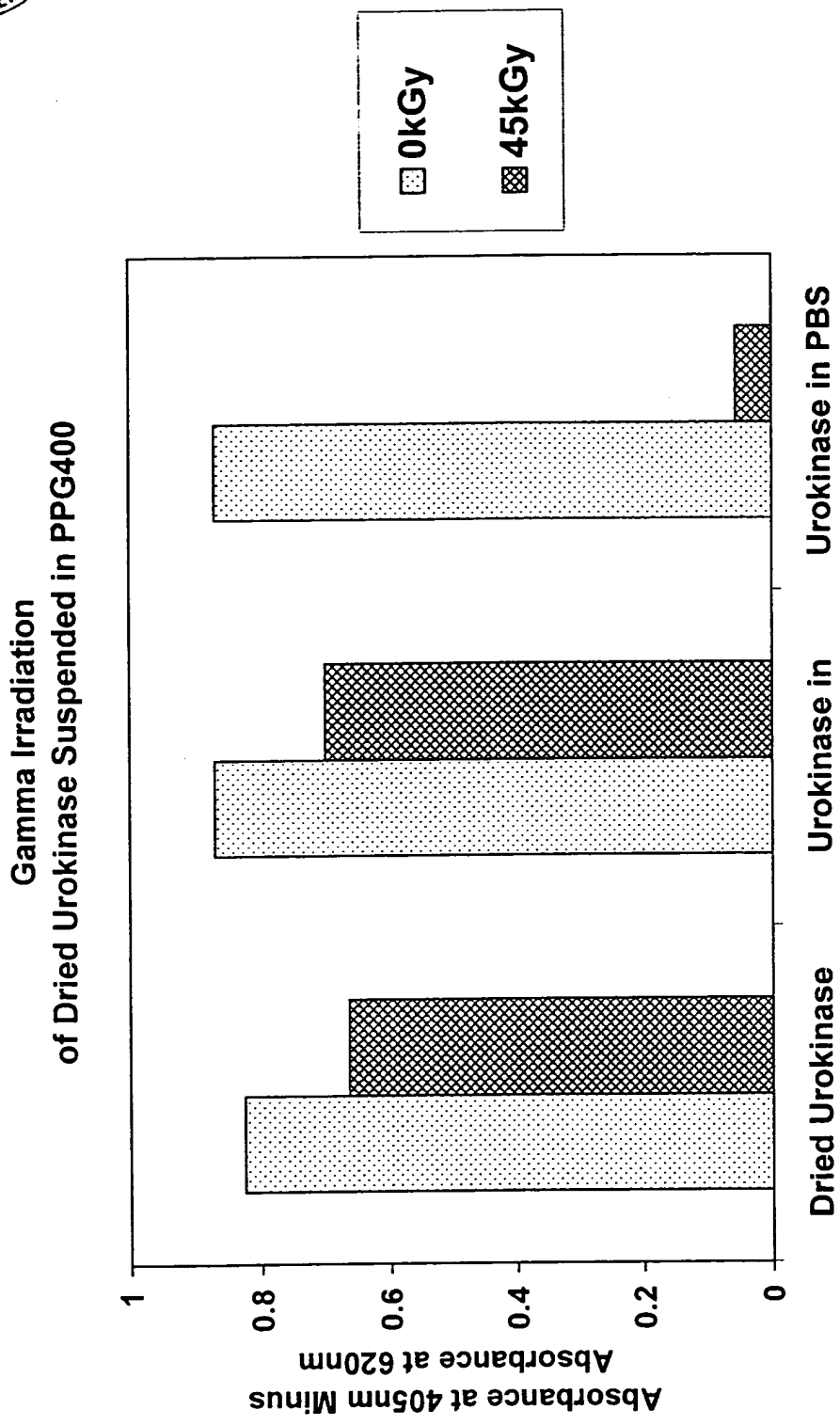


FIG. 11

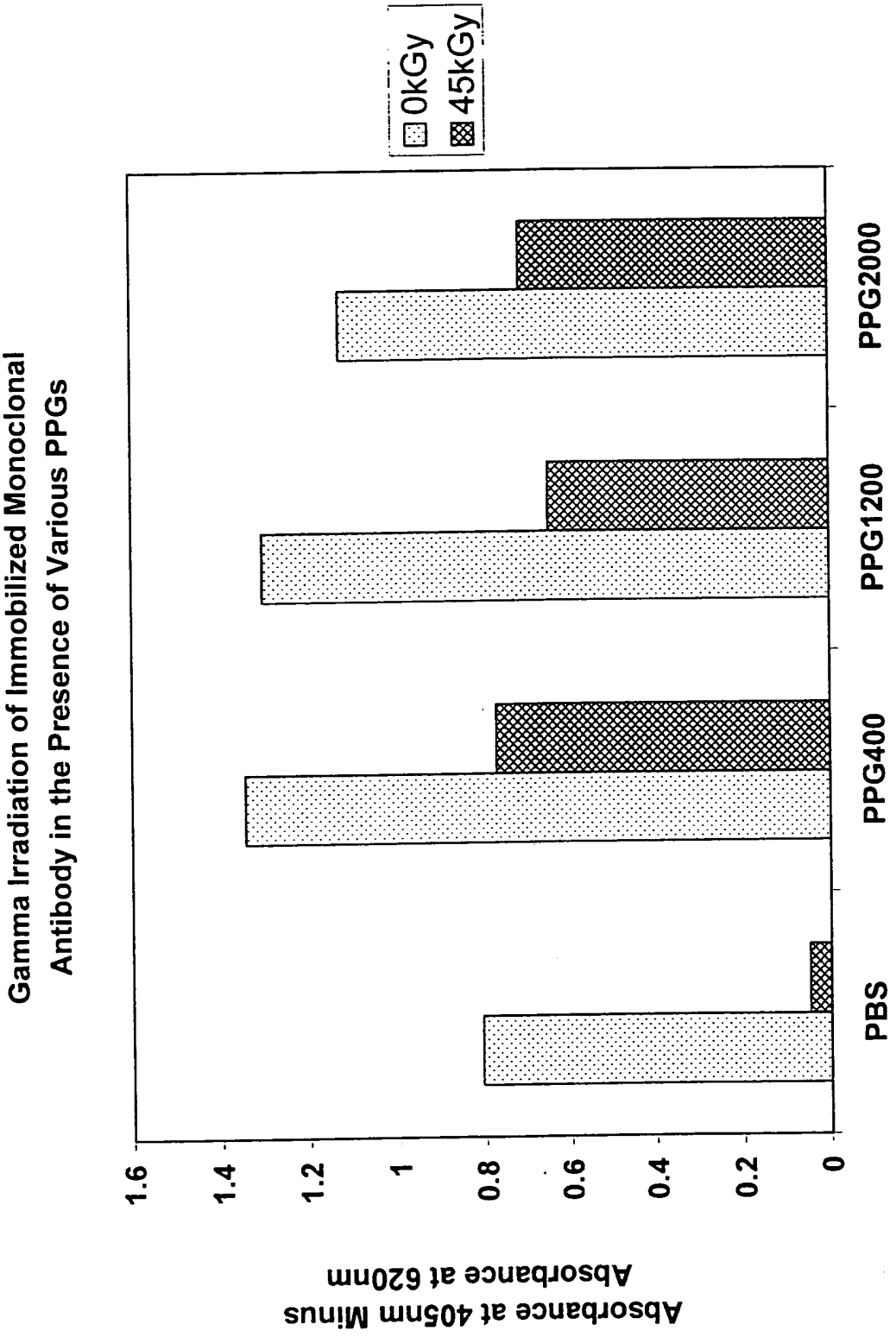


FIG. 12

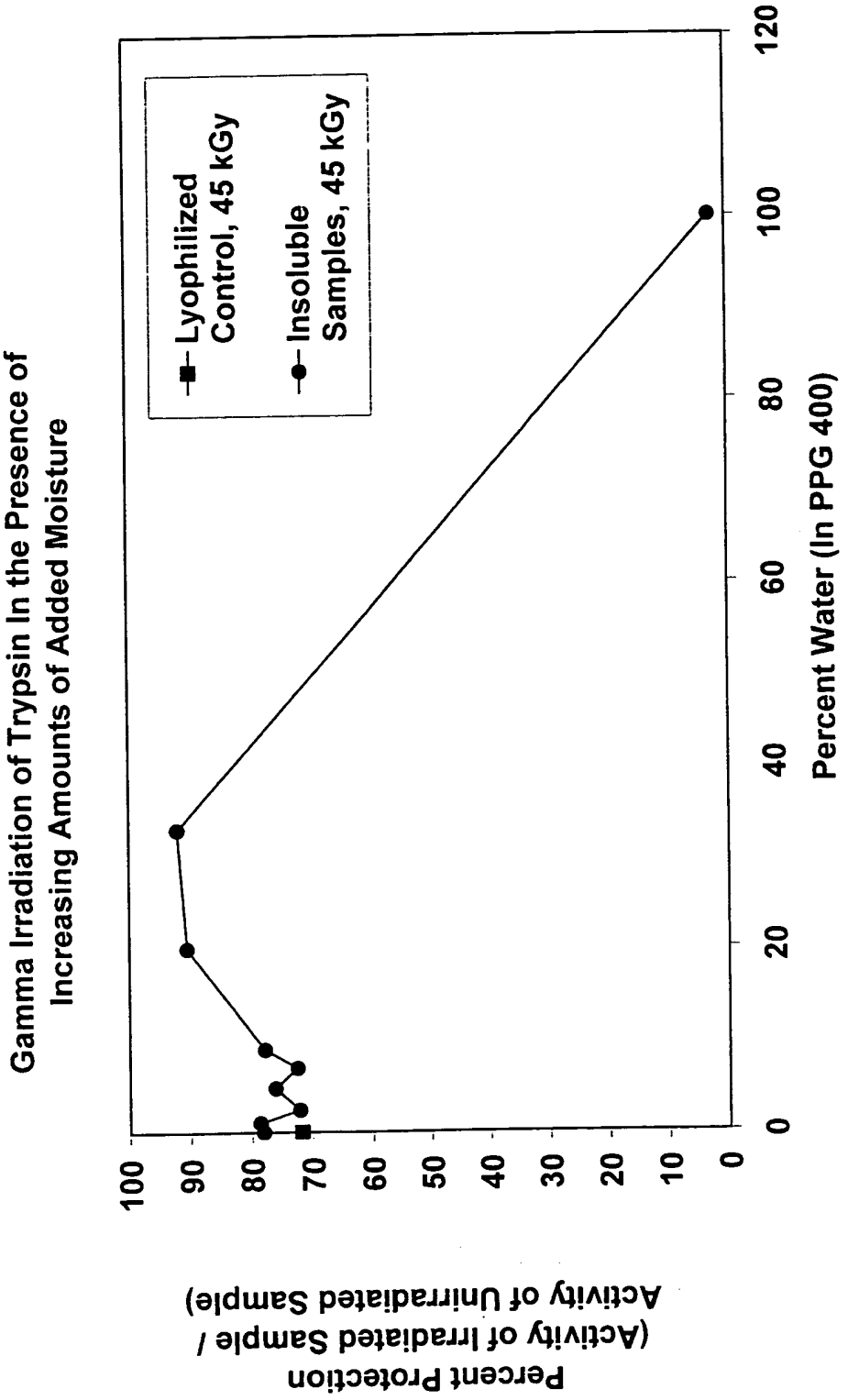


FIG. 13

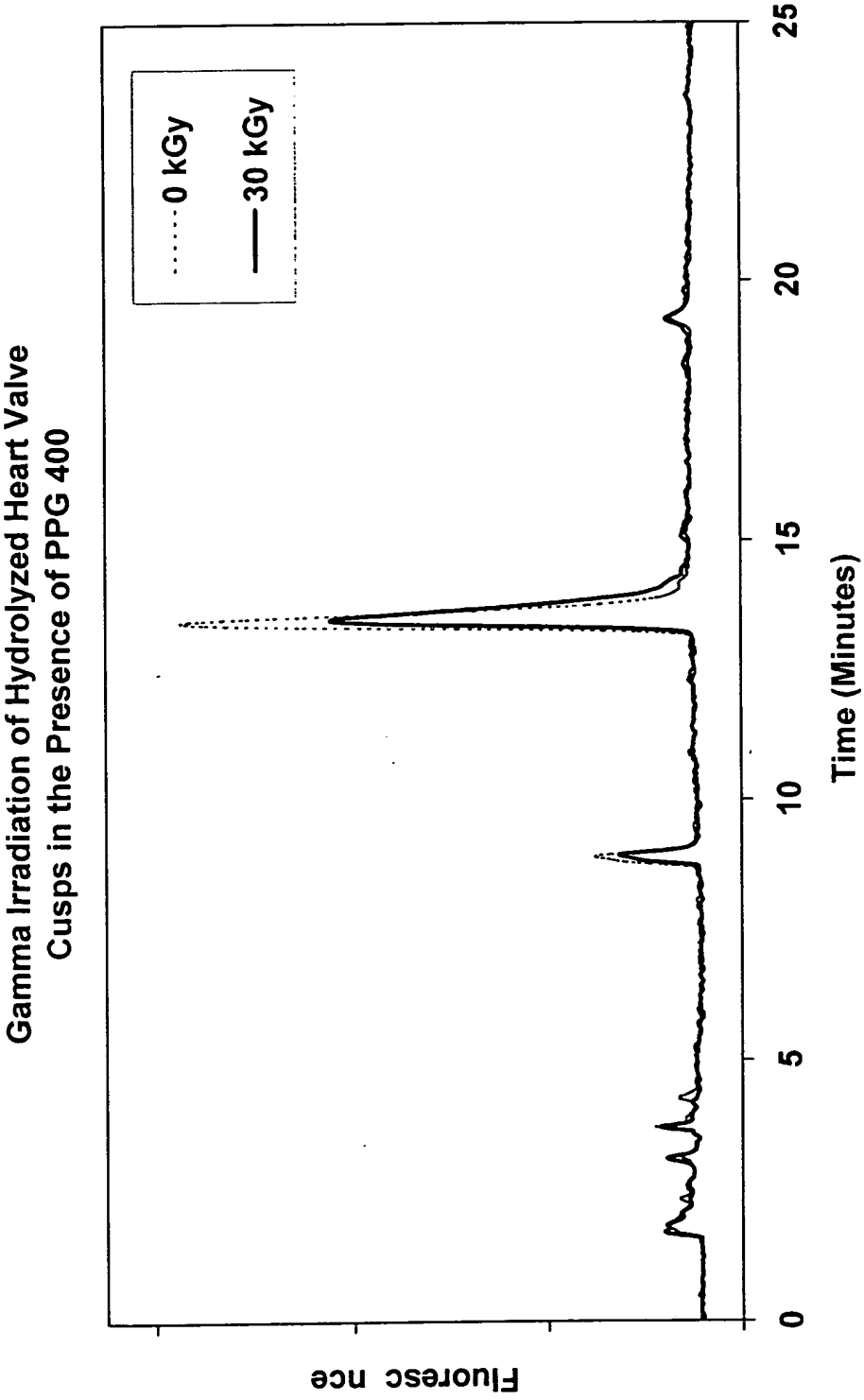


FIG. 14A

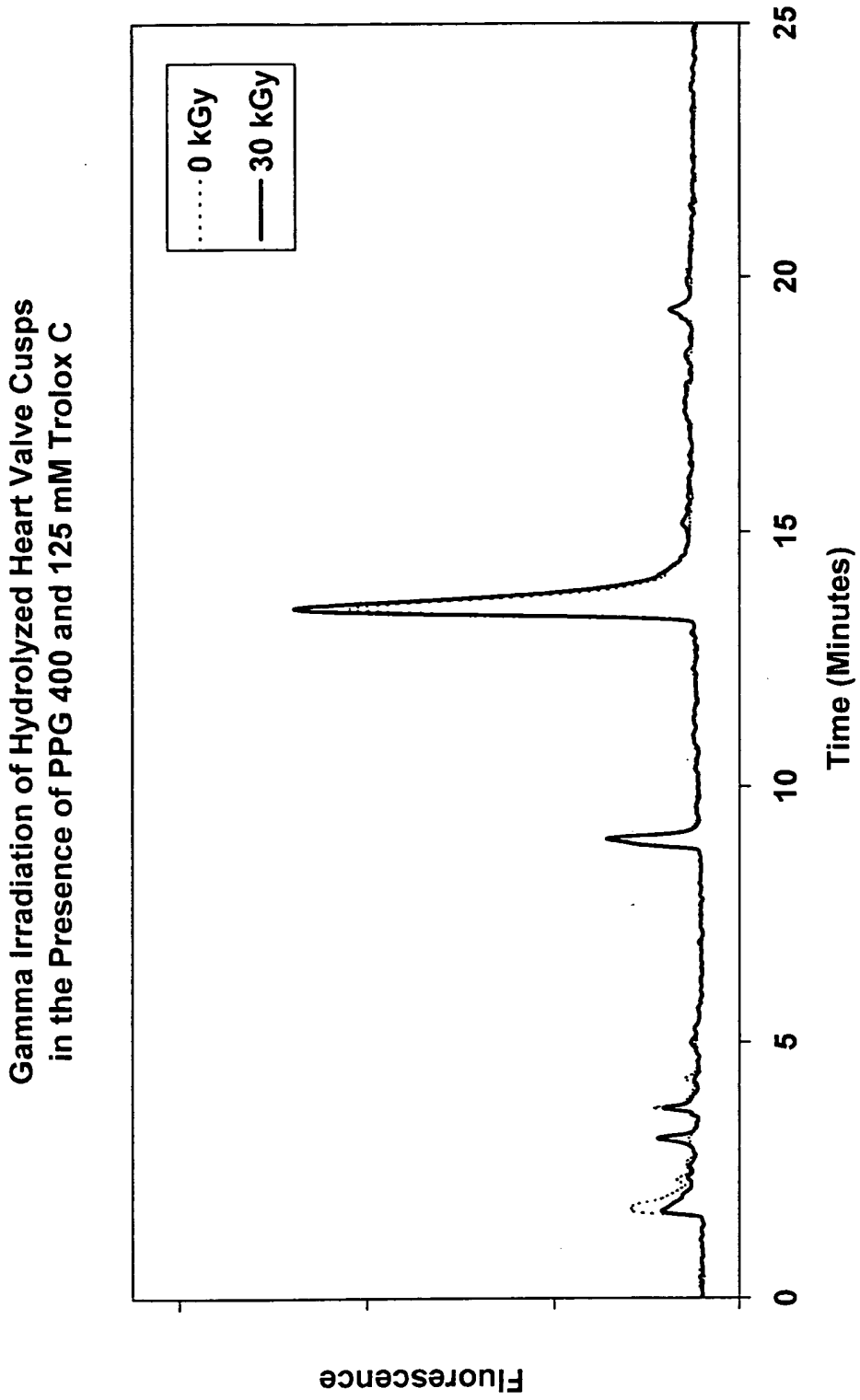


FIG. 14B

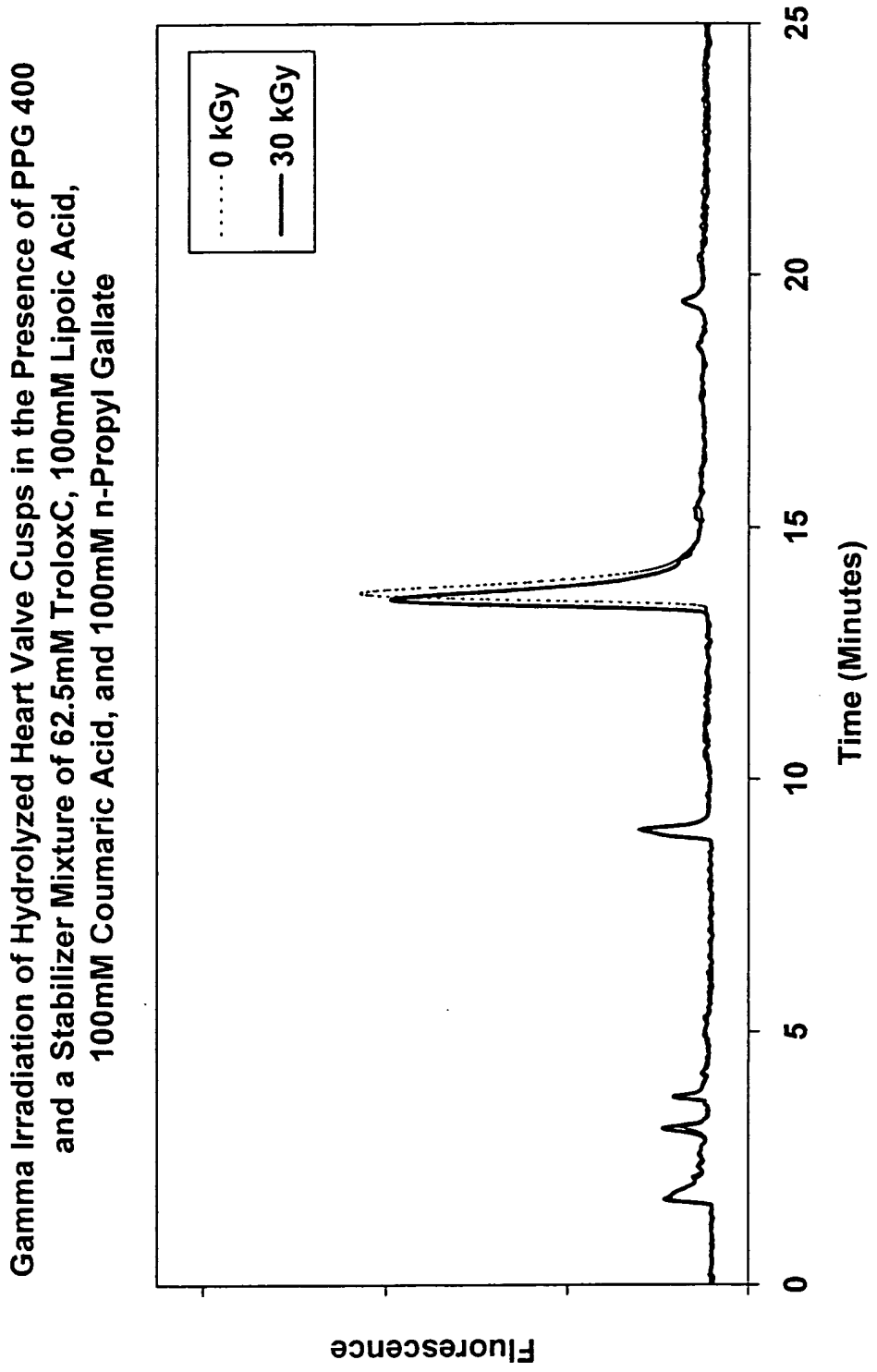
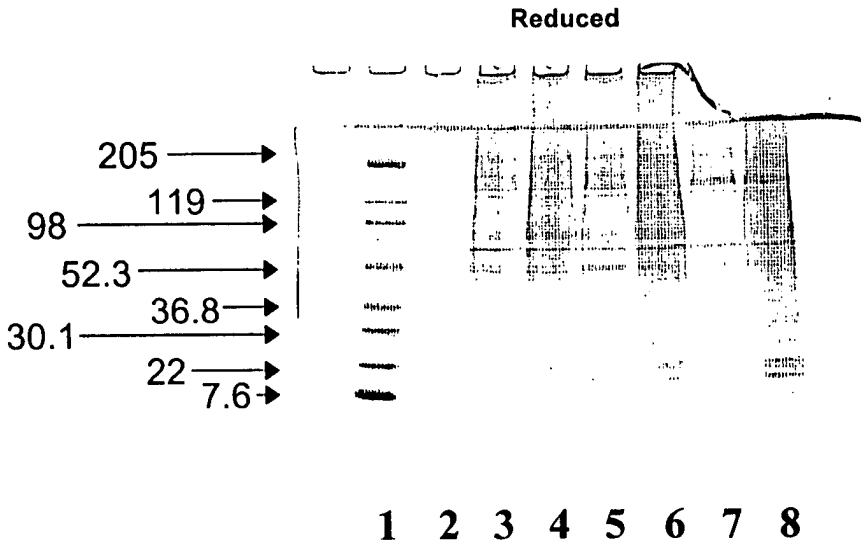


FIG. 14C

Gamma Irradiation of Porcine Heart Valve Cusps in the Presence of PPG400 with Various Stabilizers



1. Molecular Weight Markers
2. Blank
3. PPG400, 0 kGy
4. PPG400, 30 kGy
5. PPG400 and TroloxC, 0 kGy
6. PPG400 and TroloxC, 30 kGy
7. PPG400 and a Cocktail of TroloxC, Lipoic Acid, Coumaric Acid, and n-Propyl Gallate, 0 kGy
8. PPG400 and a Cocktail of TroloxC, Lipoic Acid, Coumaric Acid, and n-Propyl Gallate, 30kGy

FIG. 14D

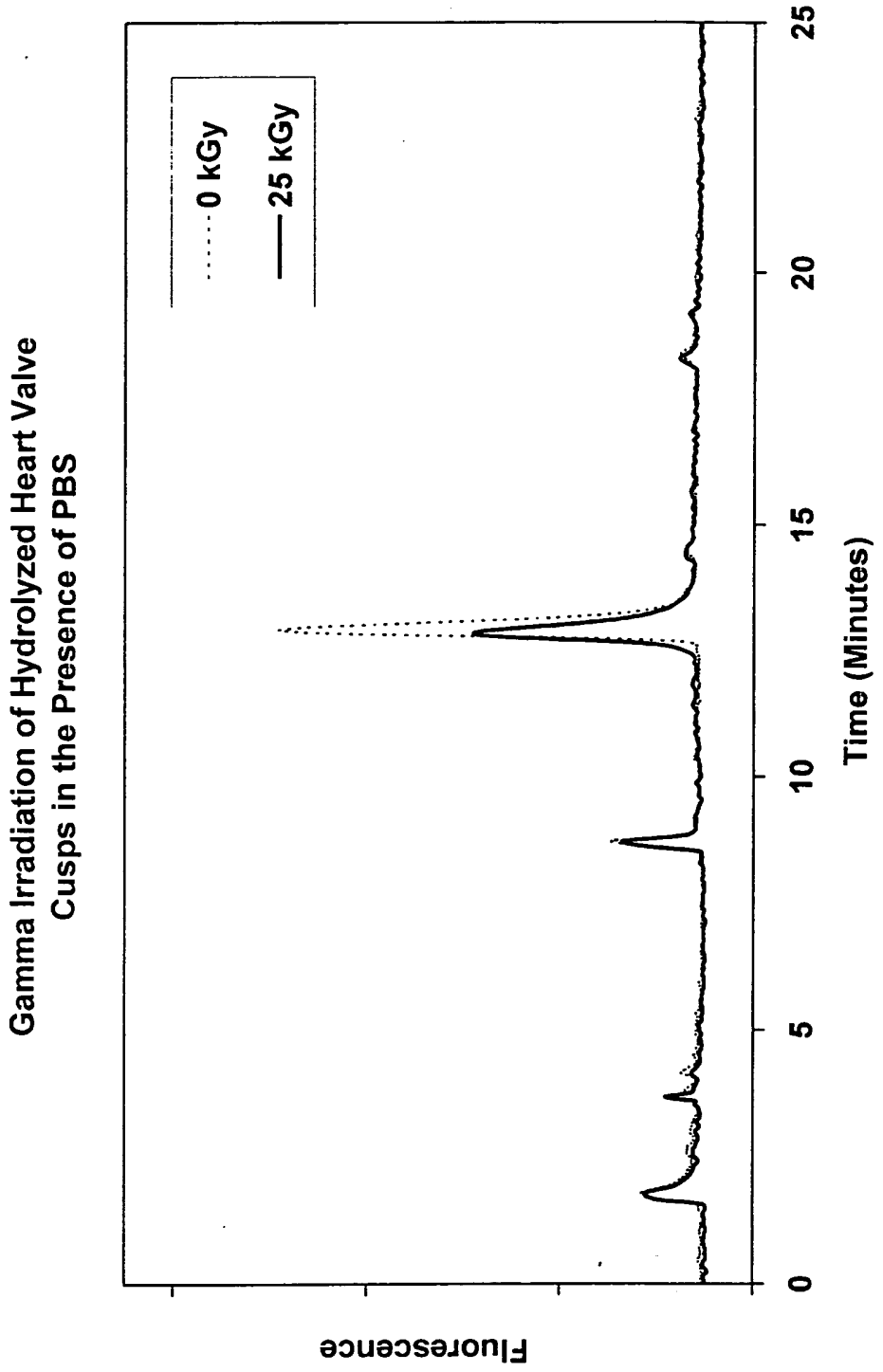


FIG. 15A

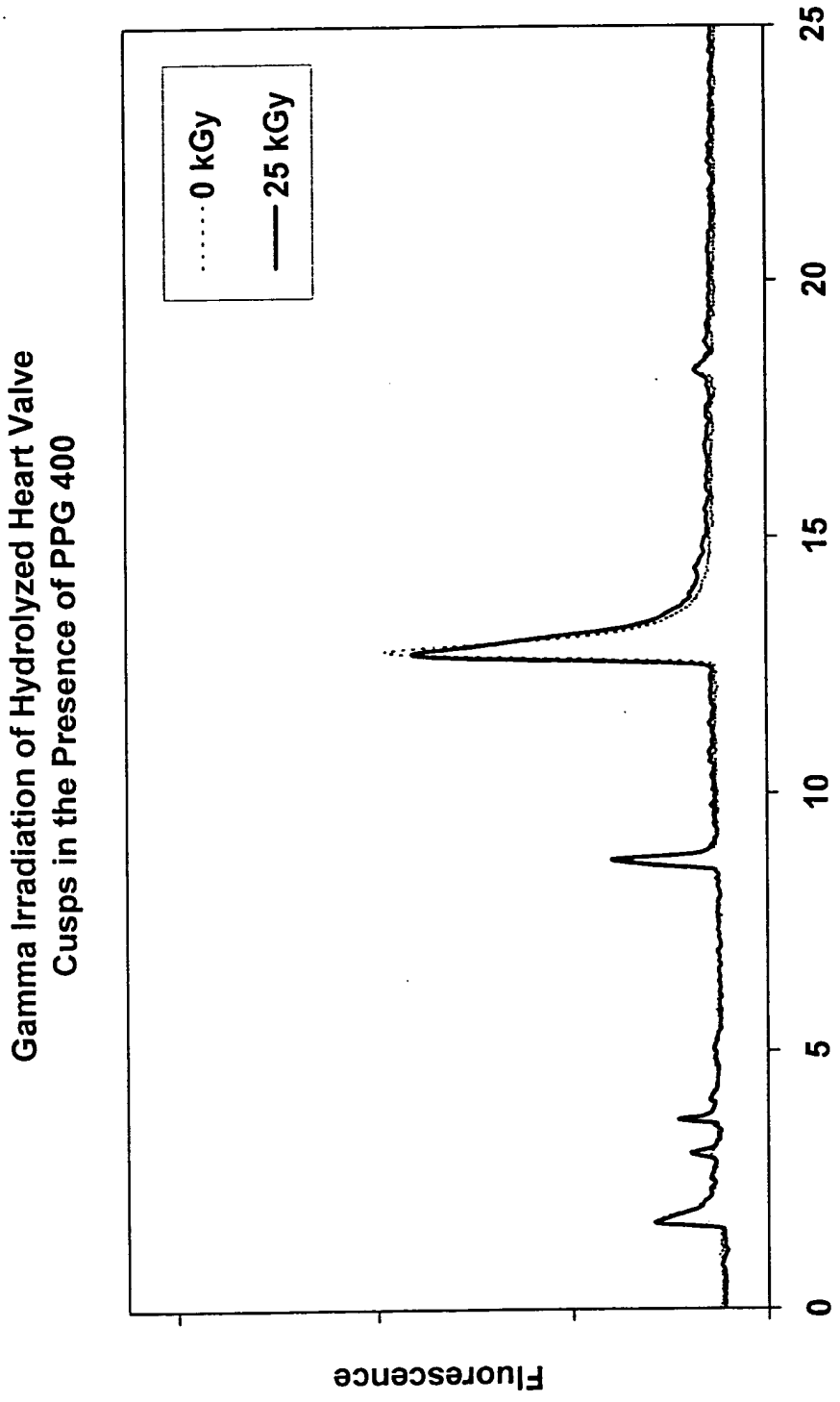


FIG. 15B

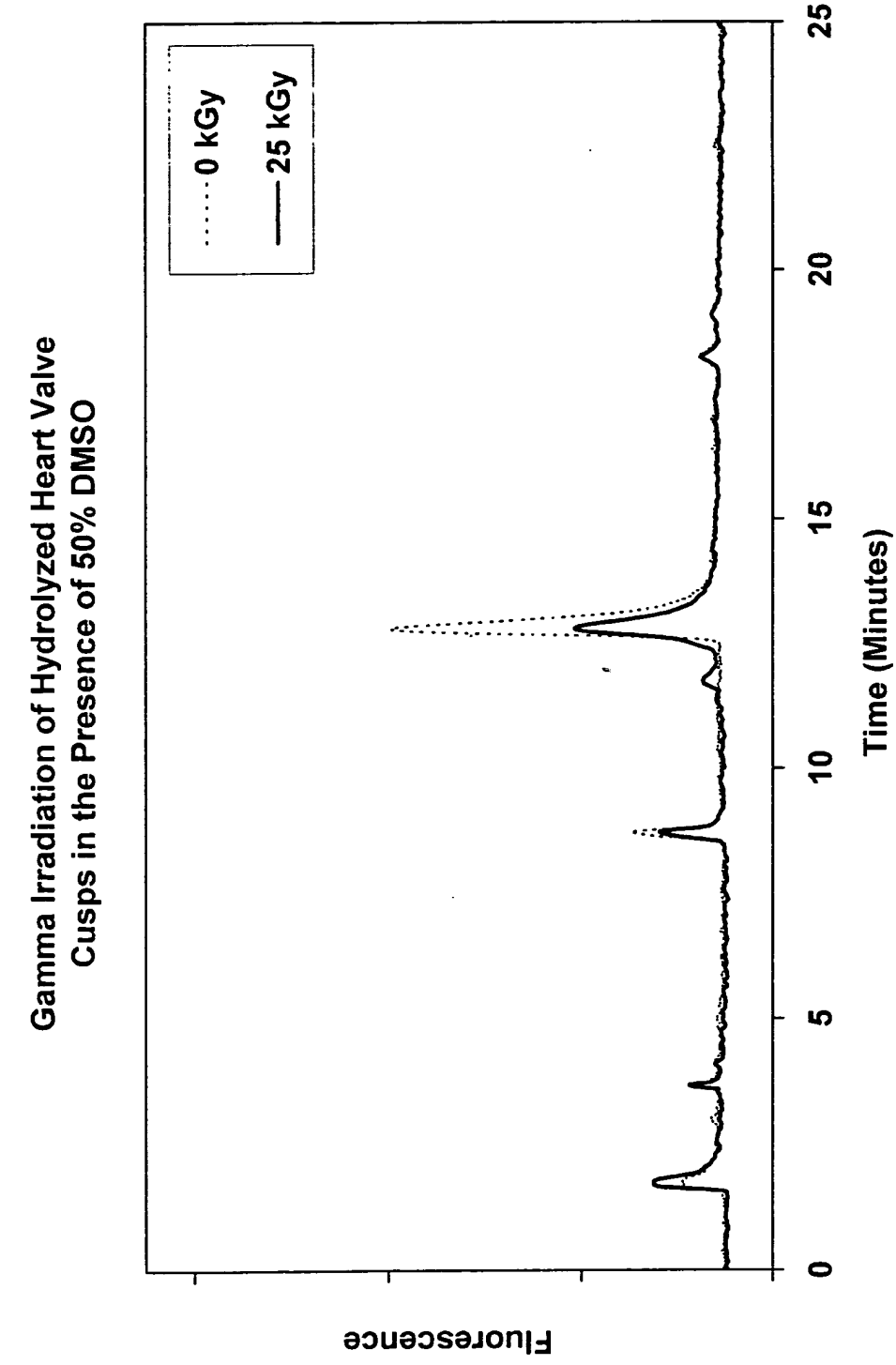


FIG. 15C

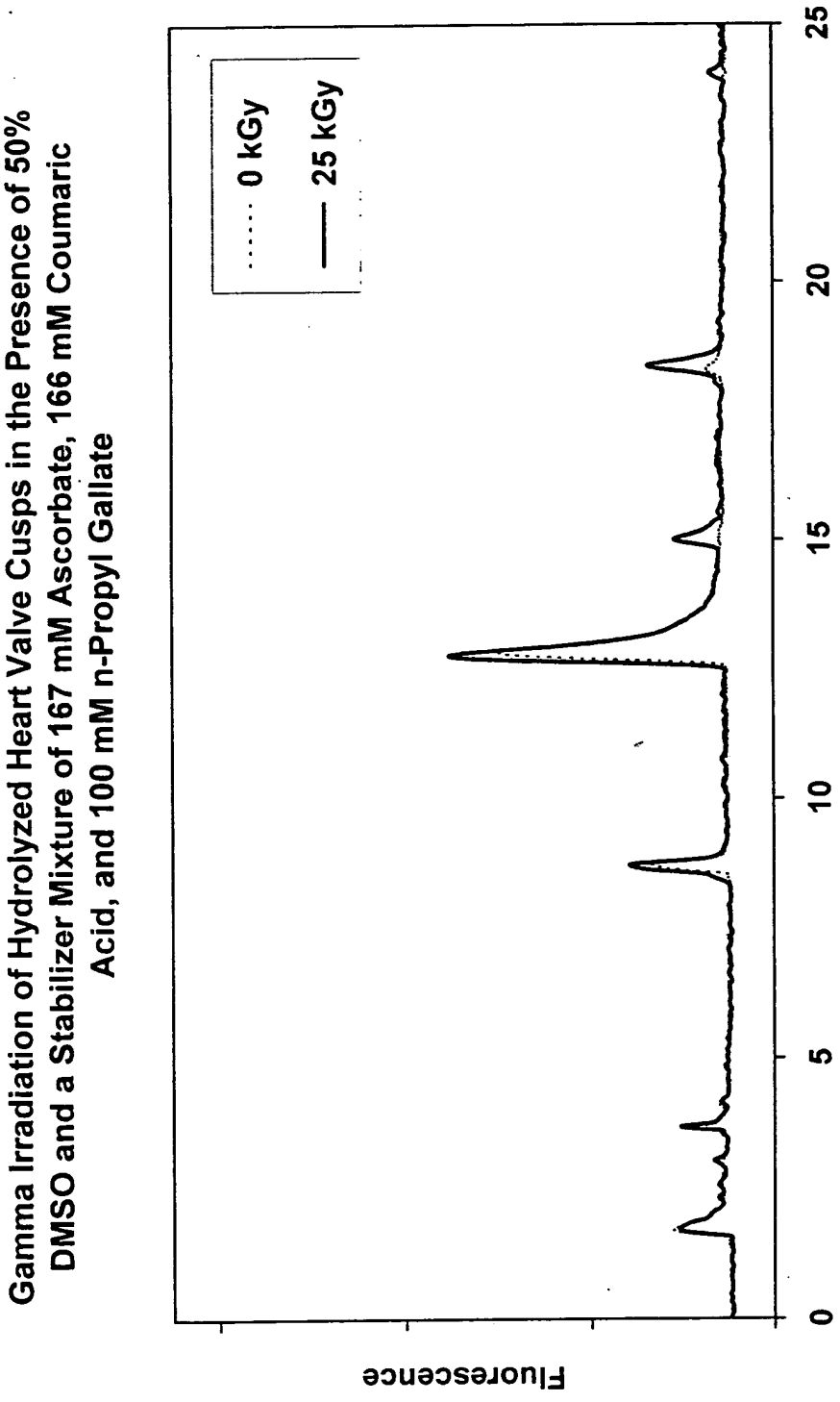
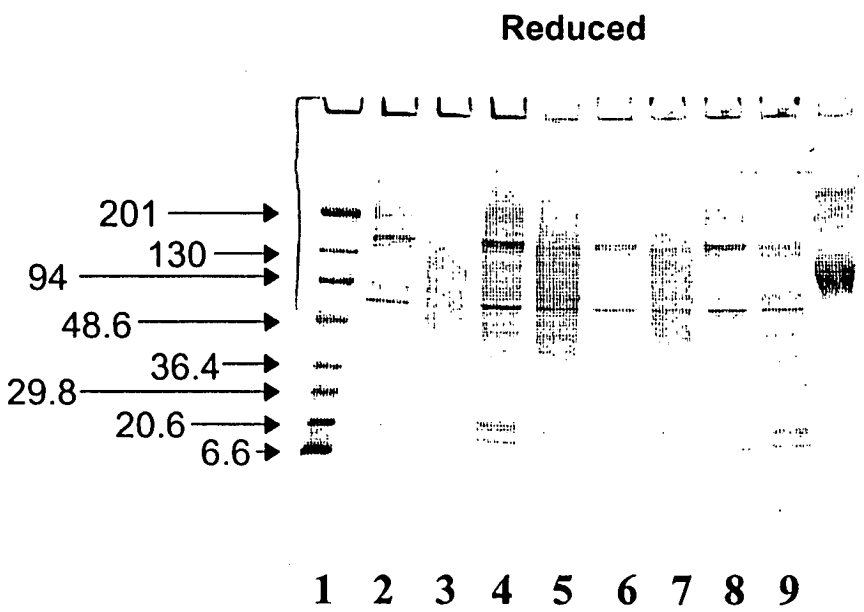


FIG. 15D

Gamma Irradiation of Porcine Heart Valve Cusps in the Presence of Various Solvents



1. Molecular Weight Markers
2. PBS, 0 kGy
3. PBS, 25 kGy
4. PPG400, 0 kGy
5. PPG400, 25 kGy
6. 50% DMSO, 0 kGy
7. 50% DMSO, 25 kGy
8. 50% DMSO and Cocktail of Ascorbate, Coumaric Acid, and n-Propyl Gallate, 0 kGy
9. 50% DMSO and Cocktail of Ascorbate, Coumaric Acid, and n-Propyl Gallate, 25 kGy

FIG. 15E

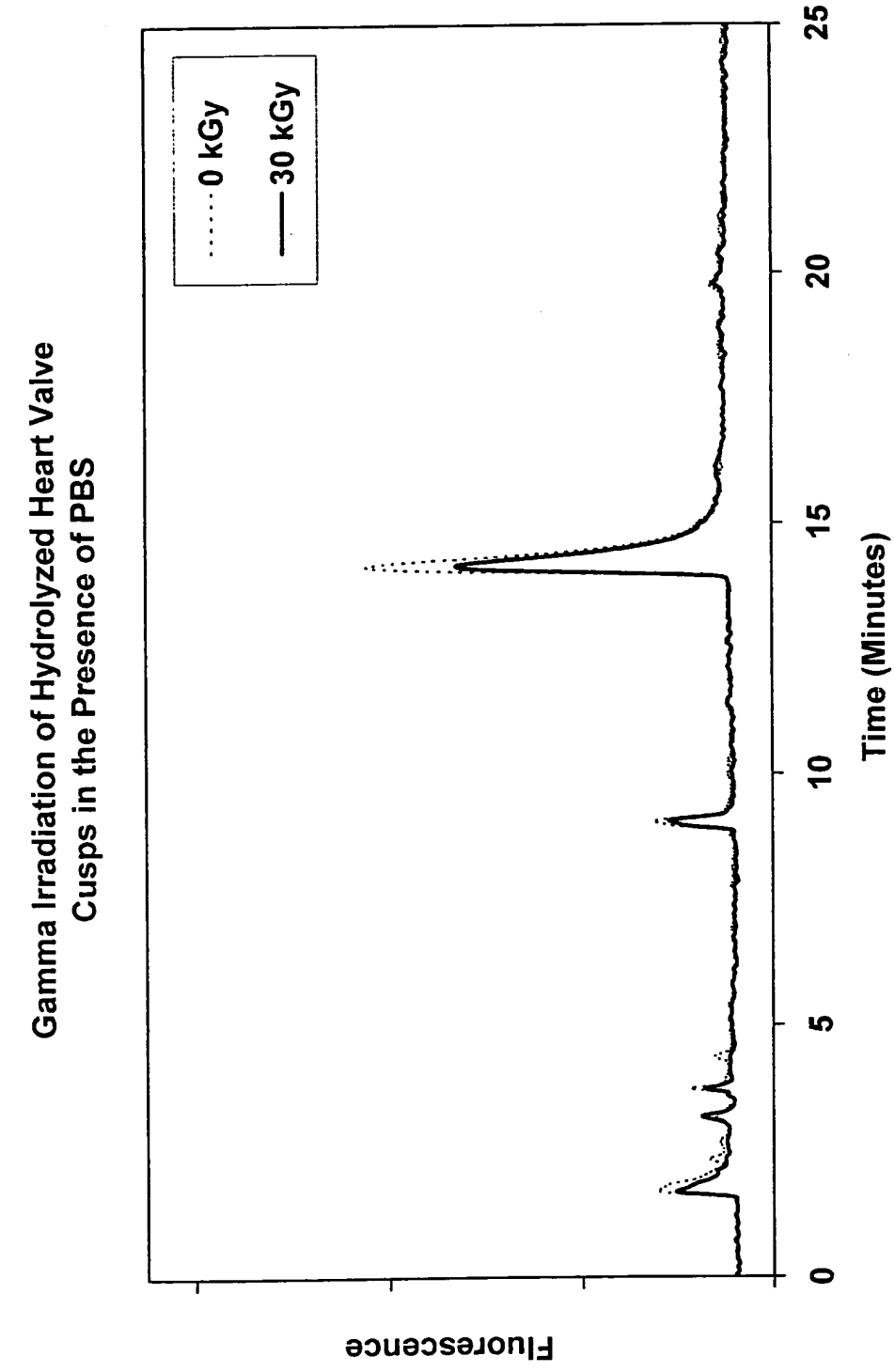


FIG. 16A

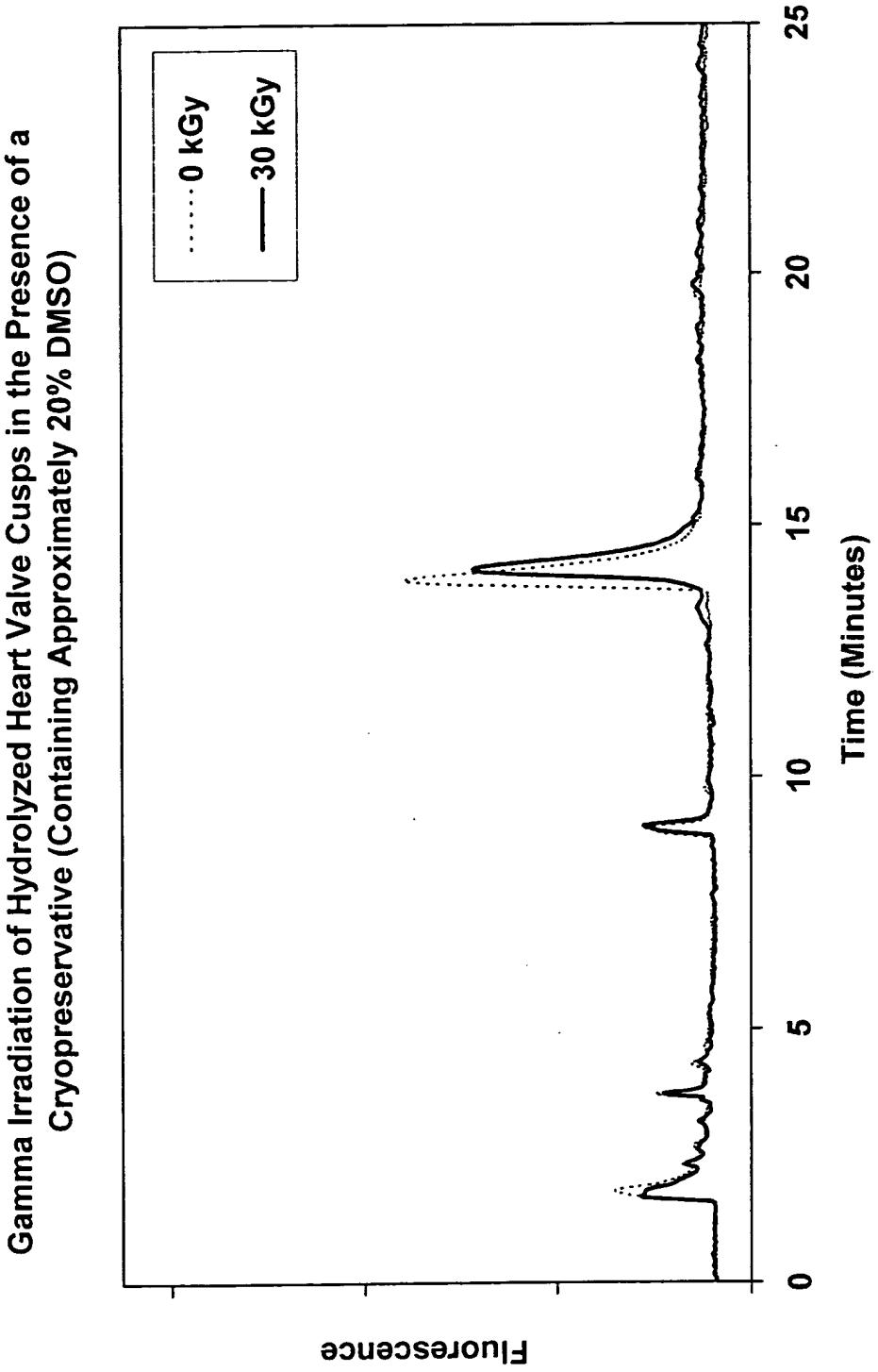


FIG. 16B

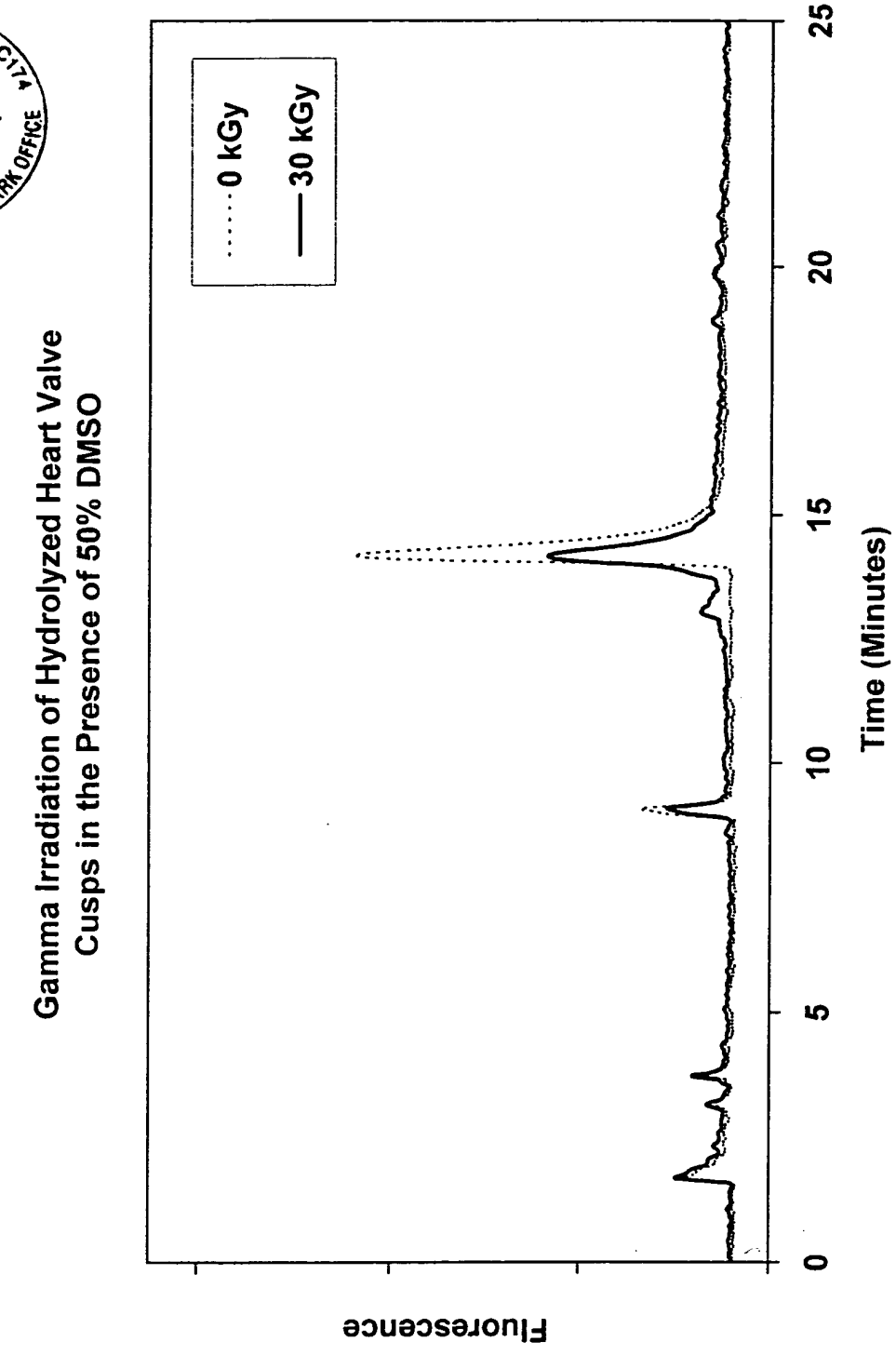


FIG. 16C

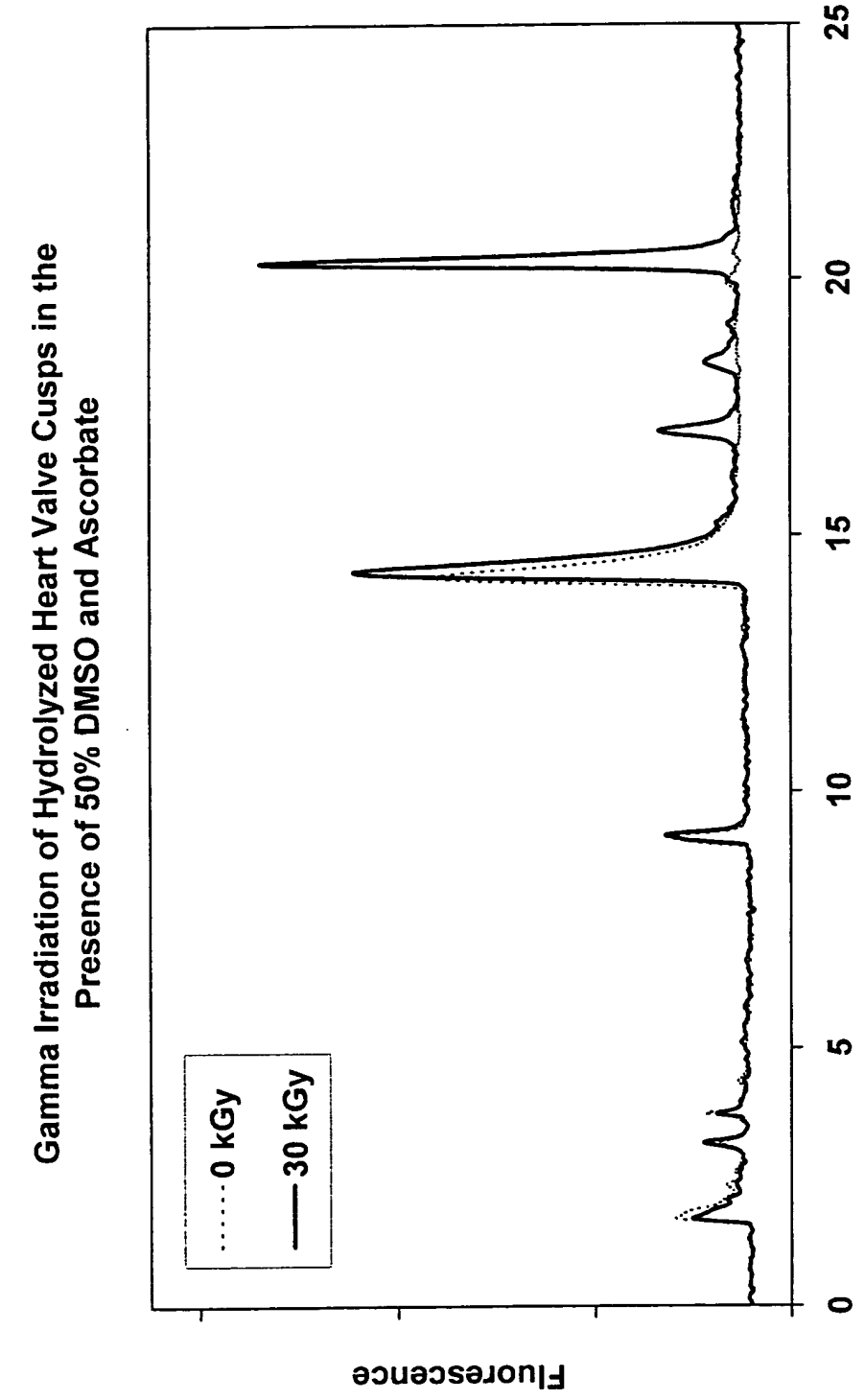
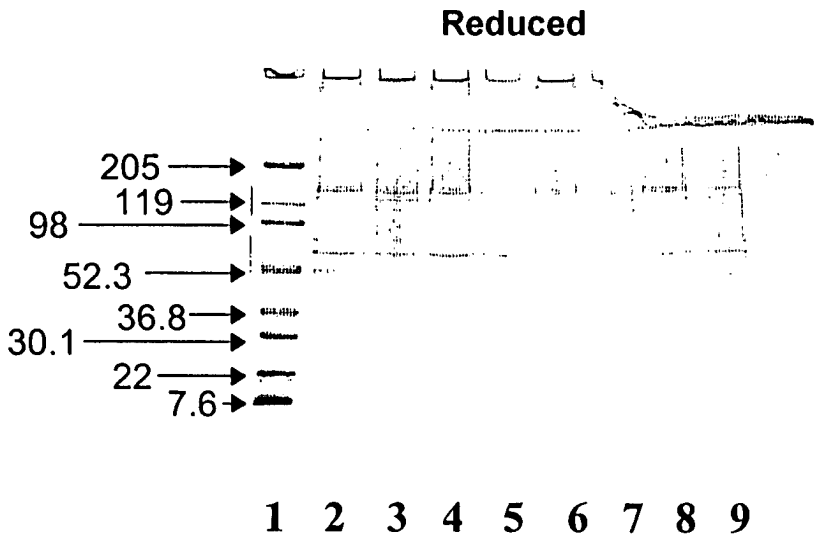


FIG. 16D

Gamma Irradiation of Porcine Heart Valve Cusps in the Presence of Various Solvents



1. Molecular Weight Markers

2. Cryopreservative, 0 kGy
3. Cryopreservative, 30 kGy

4. PBS, 0 kGy
5. PBS, 30 kGy

6. 50% DMSO, 0 kGy
7. 50% DMSO, 30 kGy

8. 50% DMSO and Ascorbate, 0 kGy
9. 50% DMSO and Ascorbate, 30 kGy

FIG. 16E

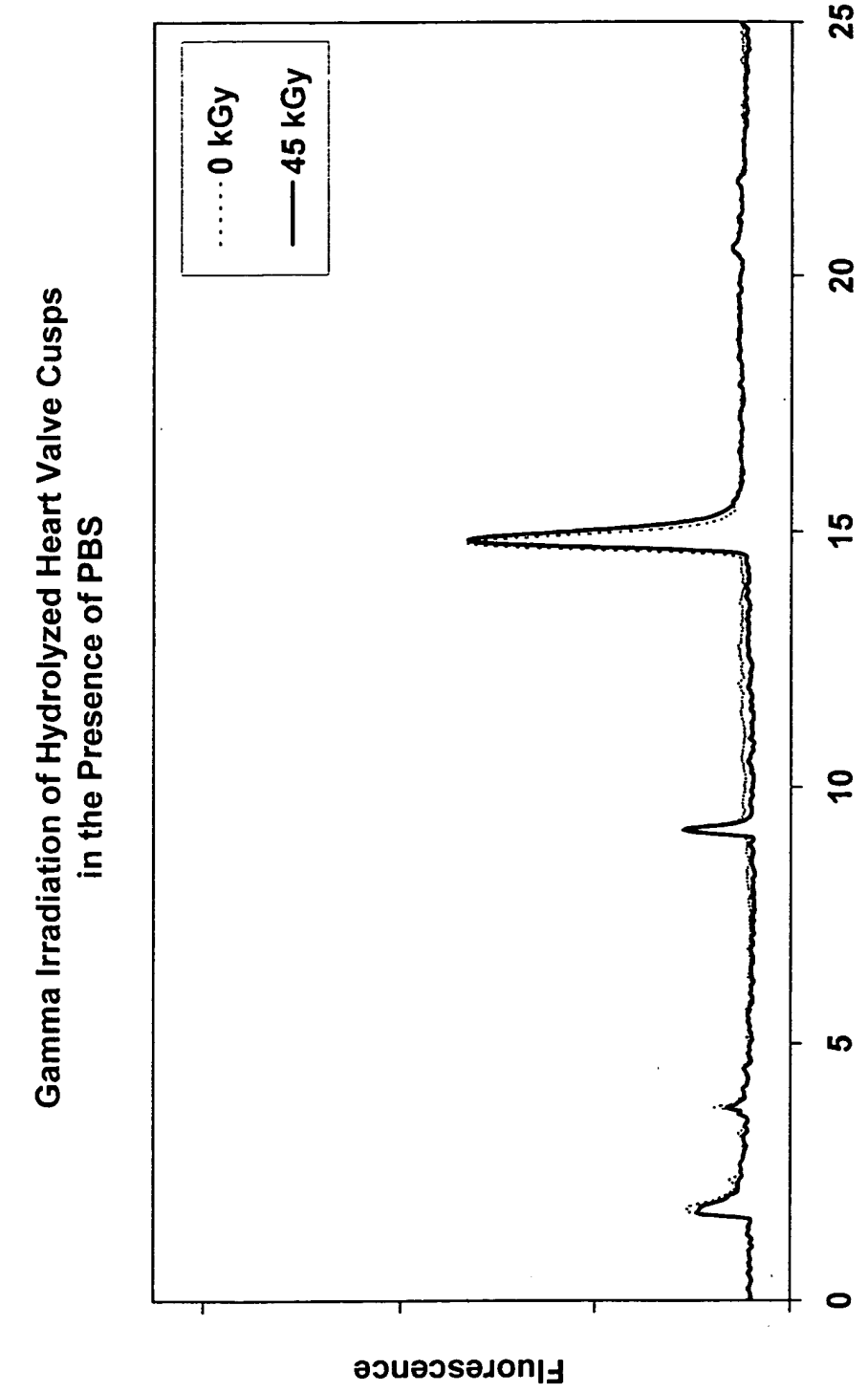


FIG. 17A

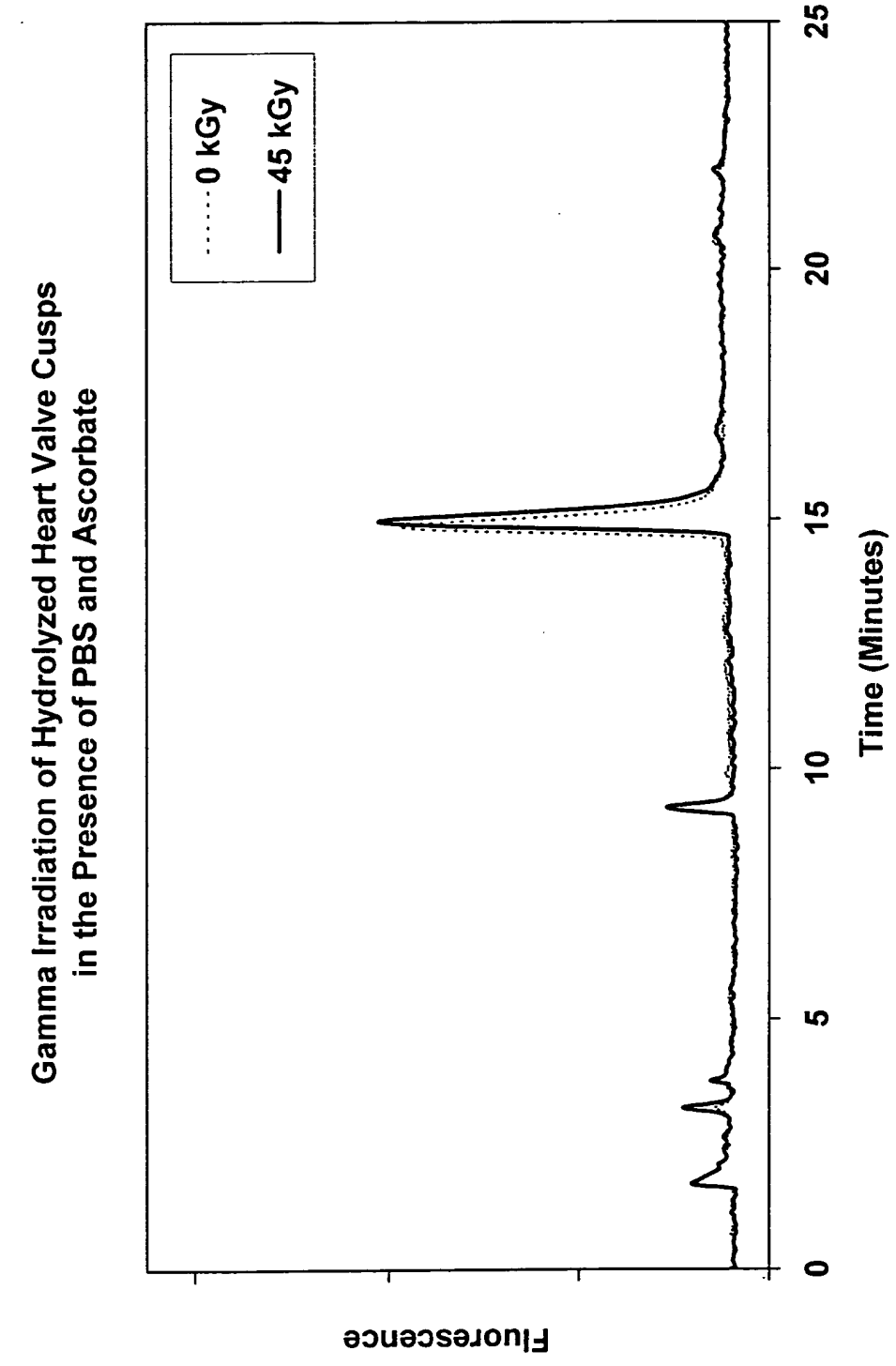


FIG. 17B

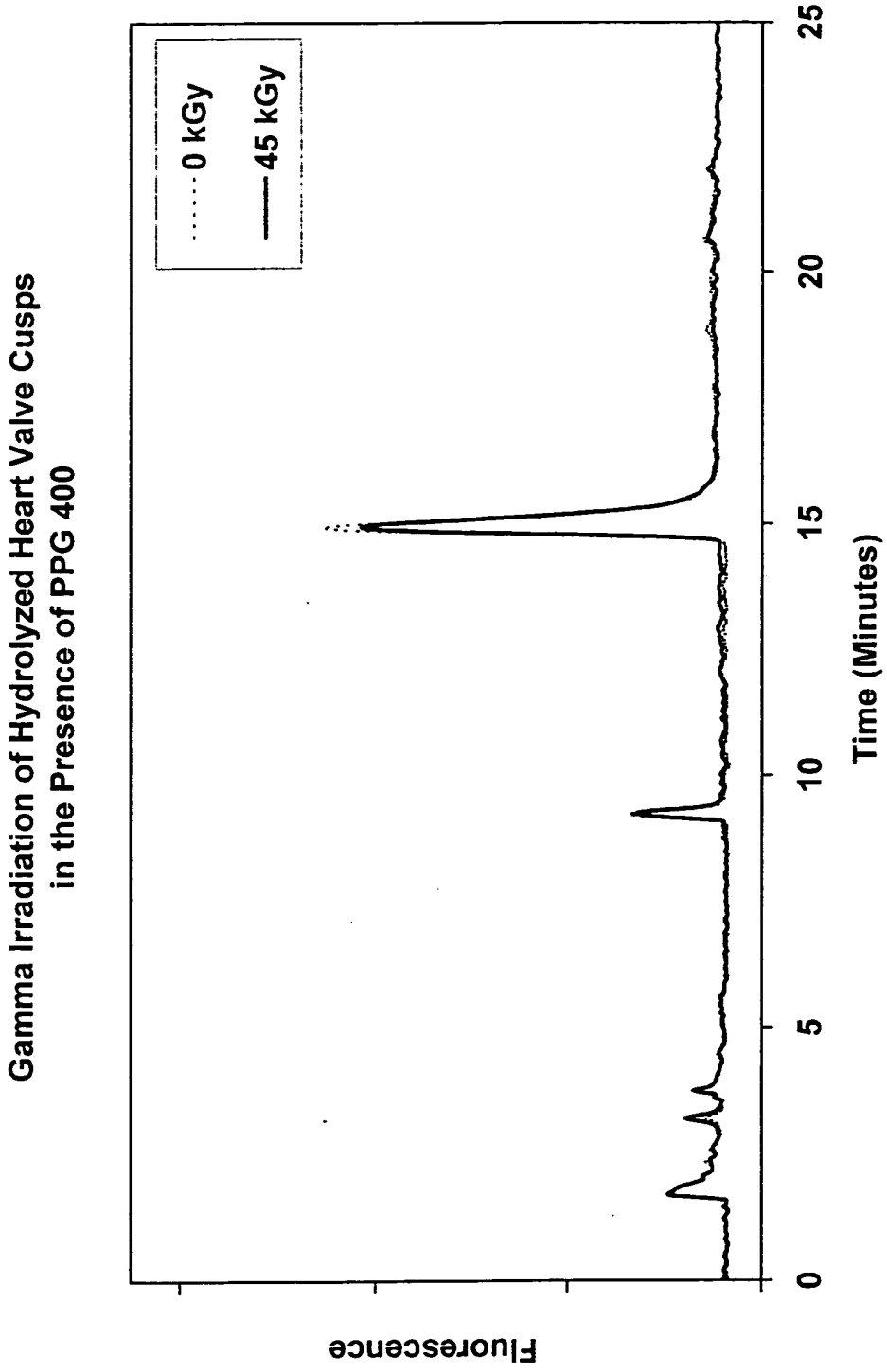


FIG. 17C

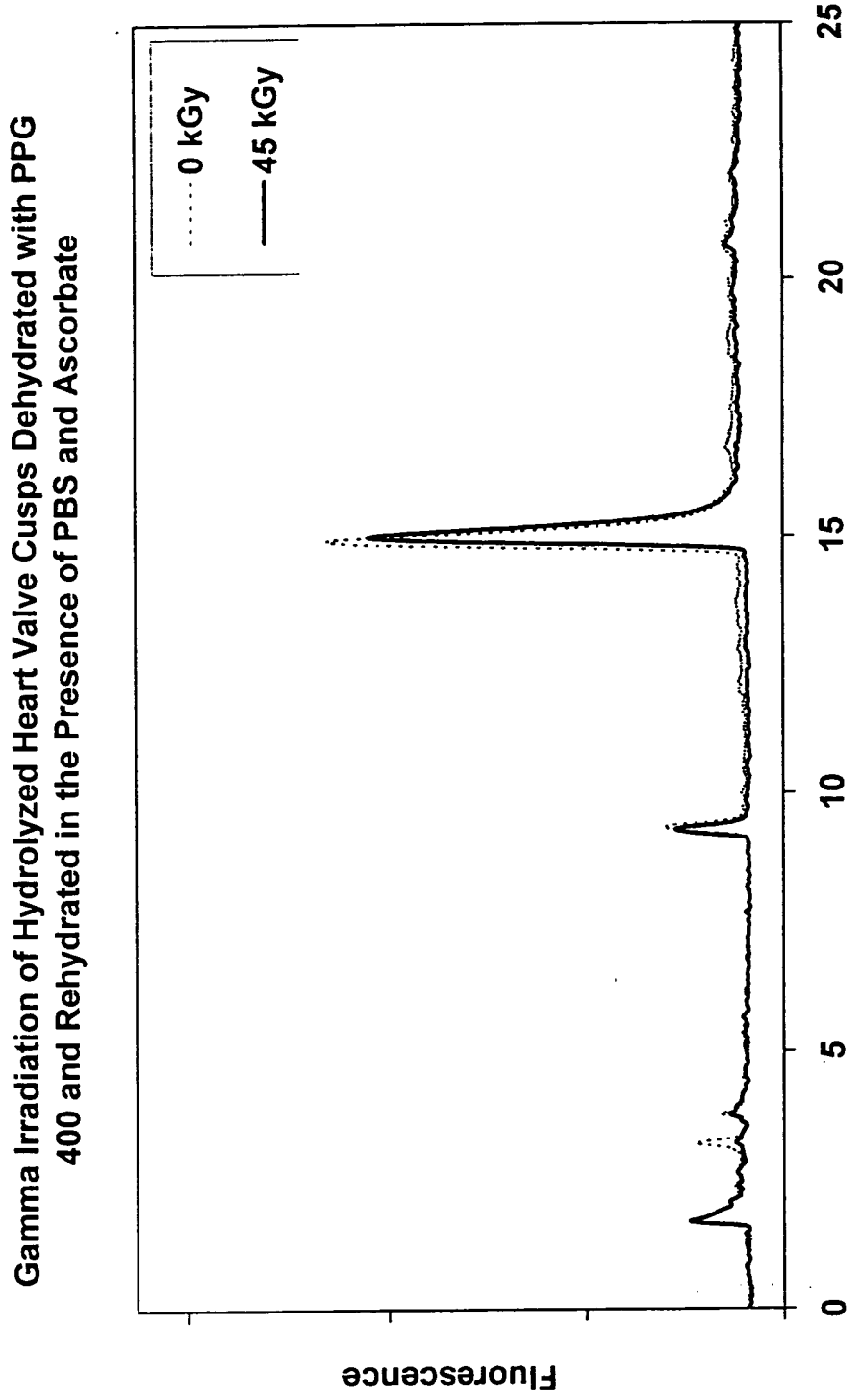


FIG. 17D

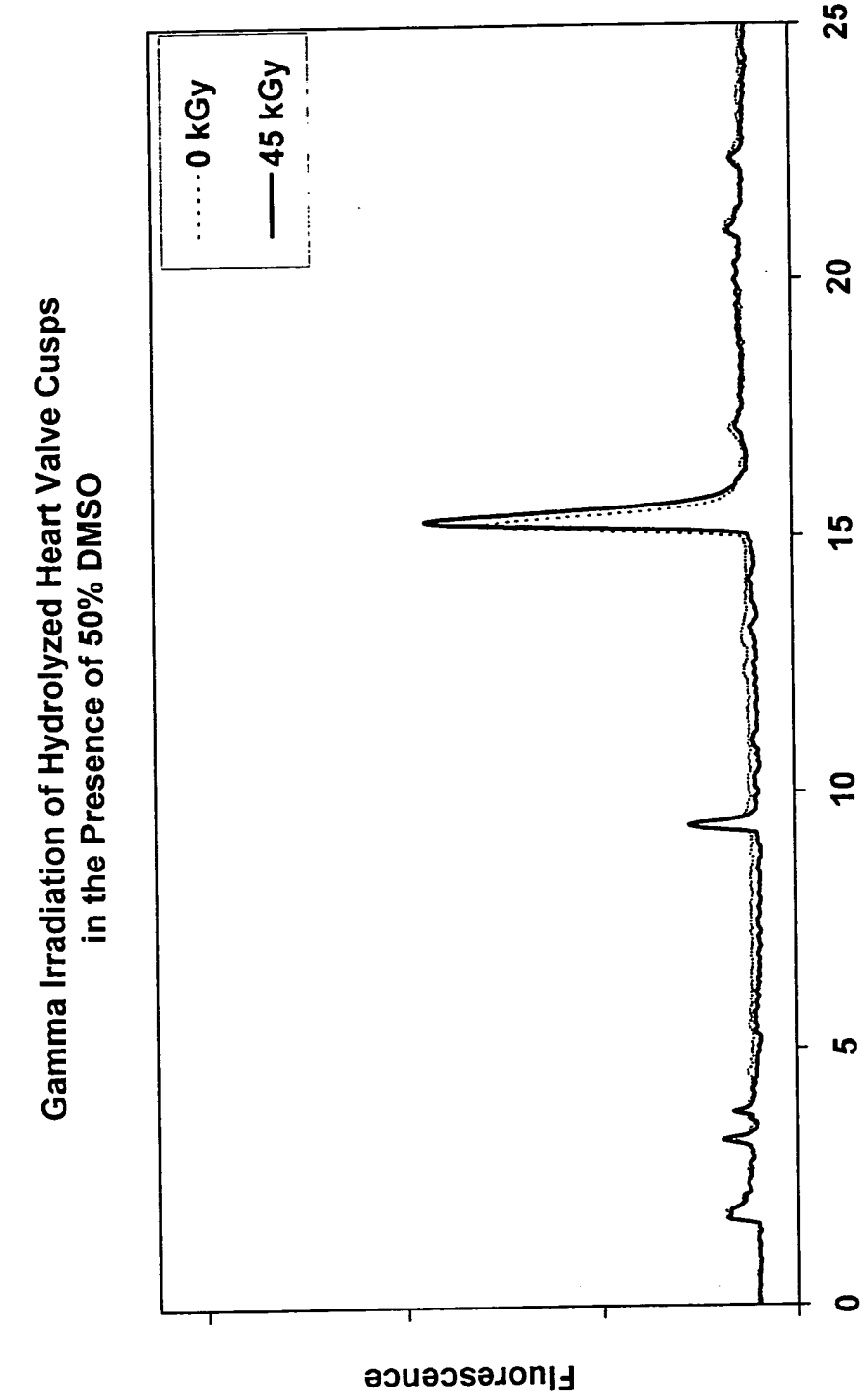


FIG. 17E

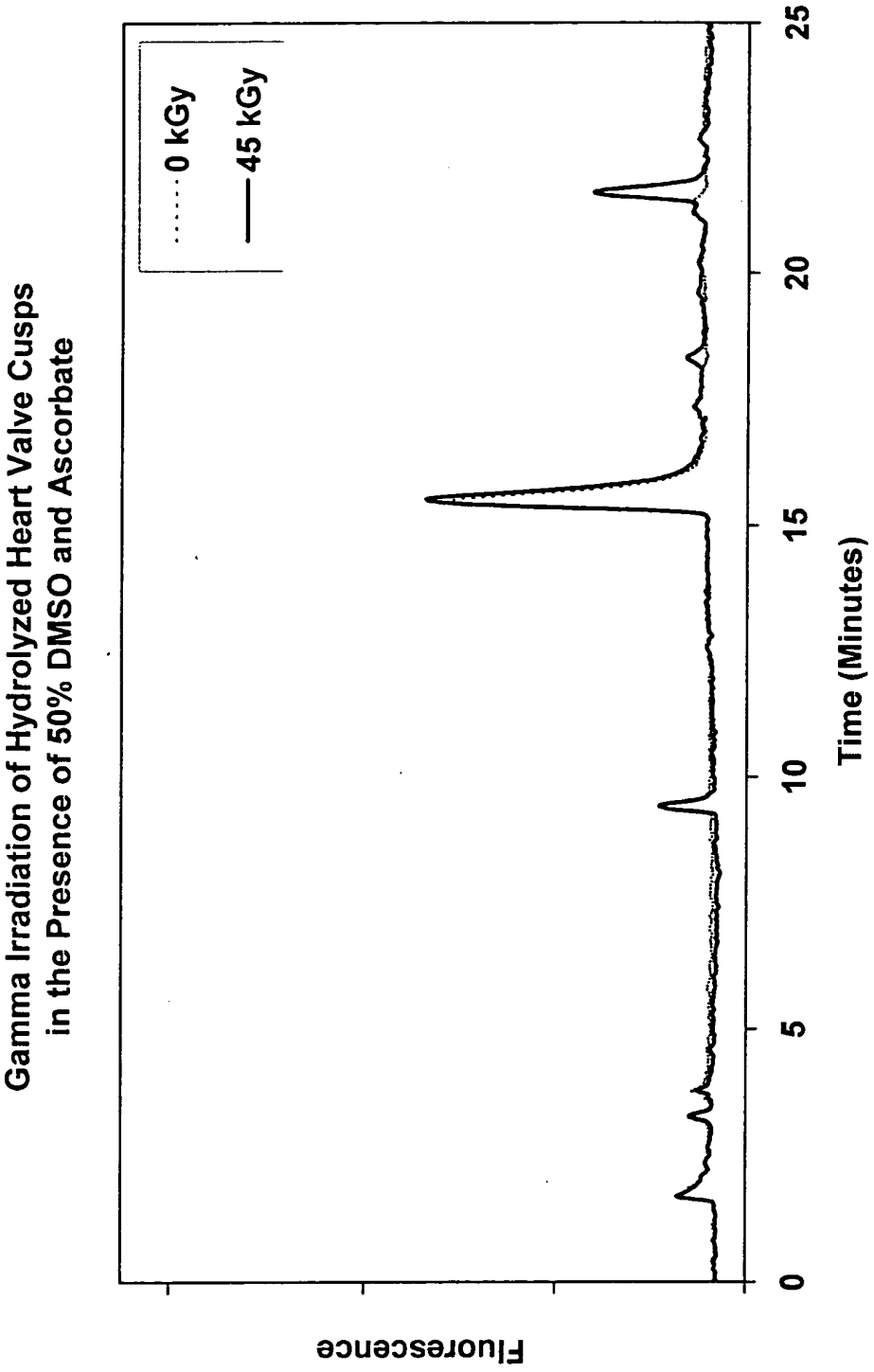
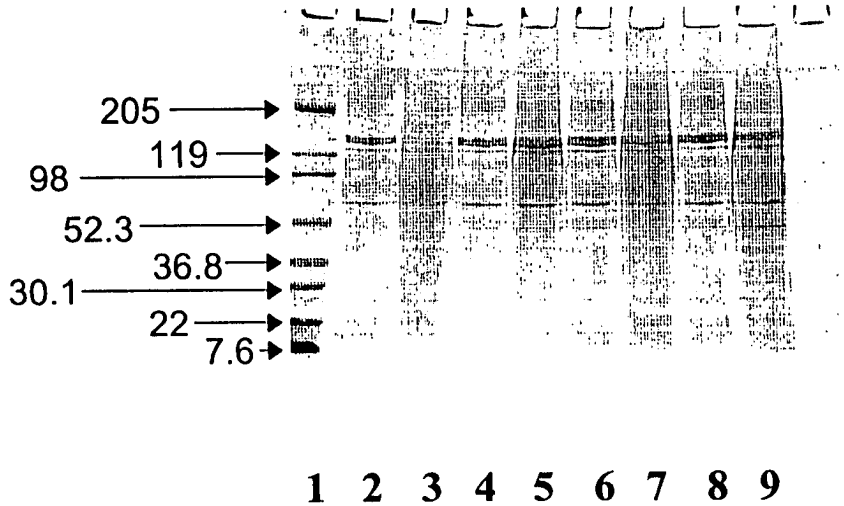


FIG. 17F

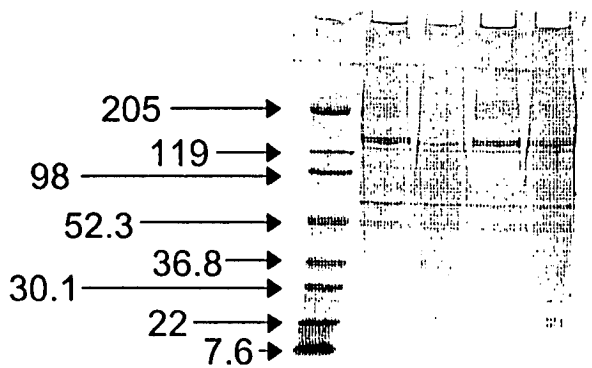
Gamma Irradiation of Porcine Heart Valve Cusps in the Presence of Various Solvents



1. Molecular Weight Markers
2. PBS, 0 kGy
3. PBS, 45 kGy
4. PBS and Ascorbate, 0 kGy
5. PBS and Ascorbate, 45 kGy
6. PPG400, 0 kGy
7. PPG400, 45 kGy
8. Dehydrated in PPG400 and Rehydrated with PBS and Ascorbate, 0 kGy
9. Dehydrated in PPG400 and Rehydrated with PBS and Ascorbate, 45 kGy

FIG. 17G

Gamma Irradiation of Porcine Heart Valve Cusps in the Presence of Various Solvents



1. Molecular Weight Markers
2. 50% DMSO, 0 kGy
3. 50% DMSO, 45 kGy
4. 50% DMSO and Ascorbate, 0 kGy
5. 50% DMSO and Ascorbate, 45 kGy

FIG. 17H

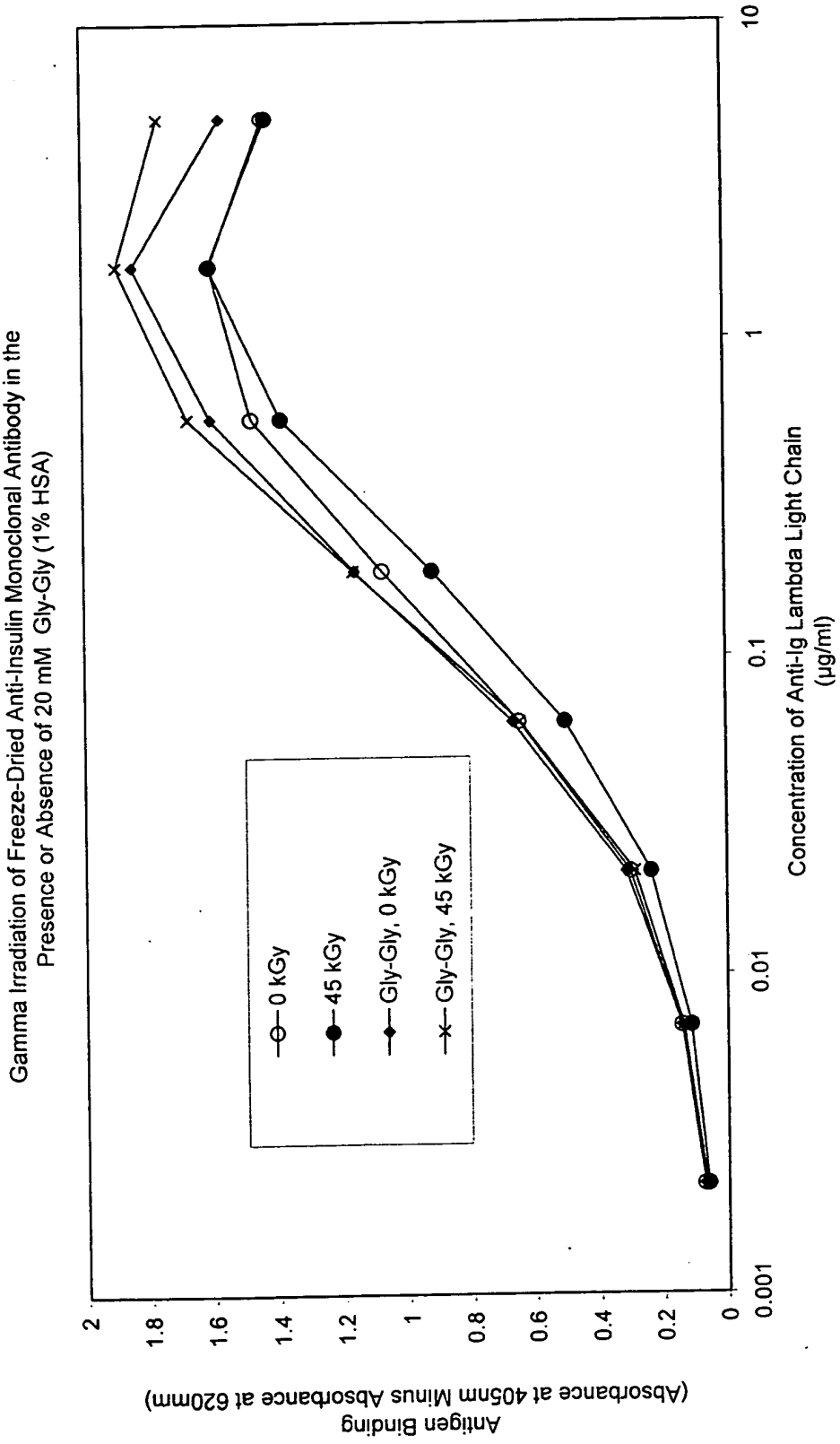


FIG. 18A

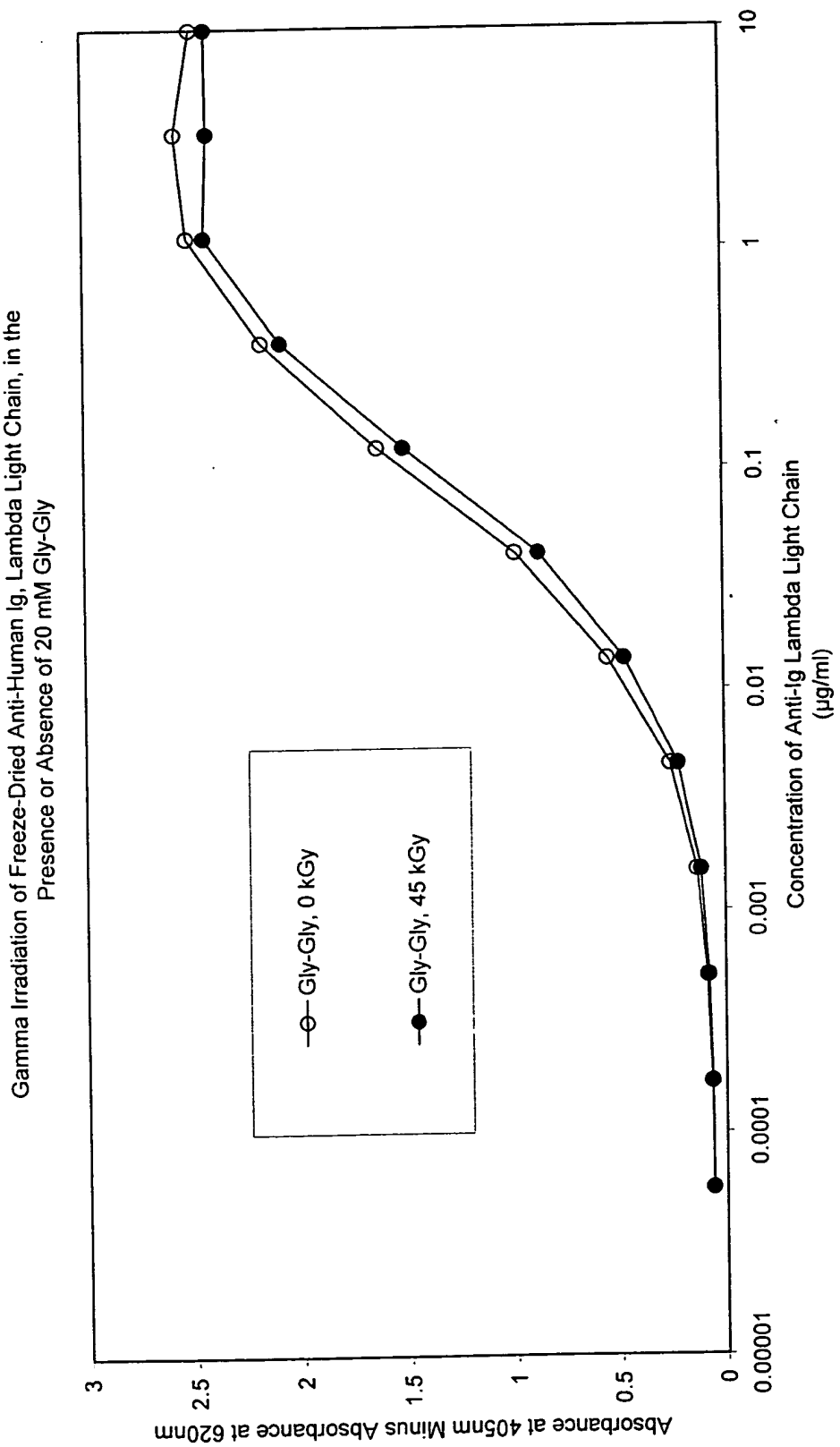


FIG. 18B

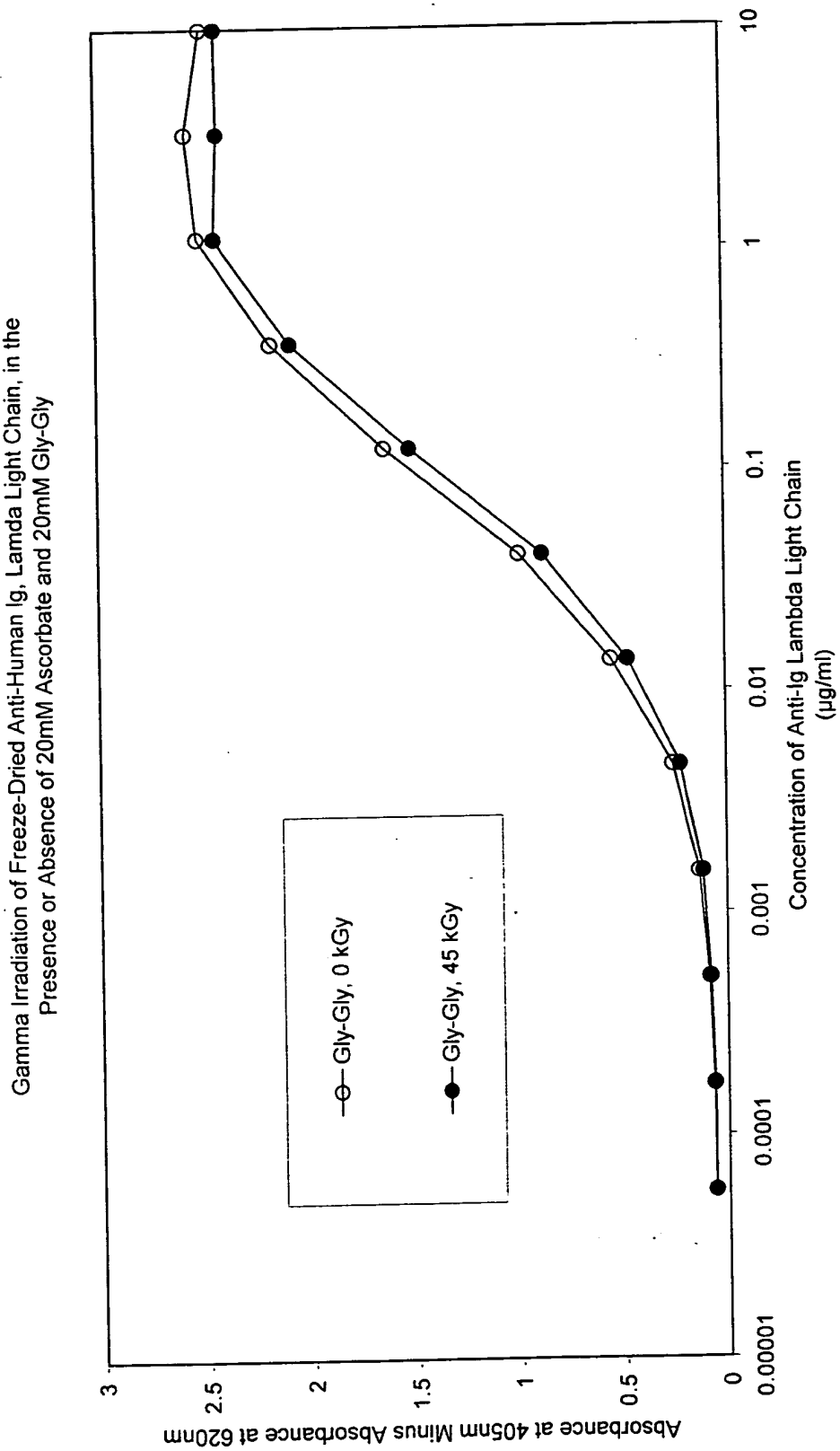


FIG. 18C

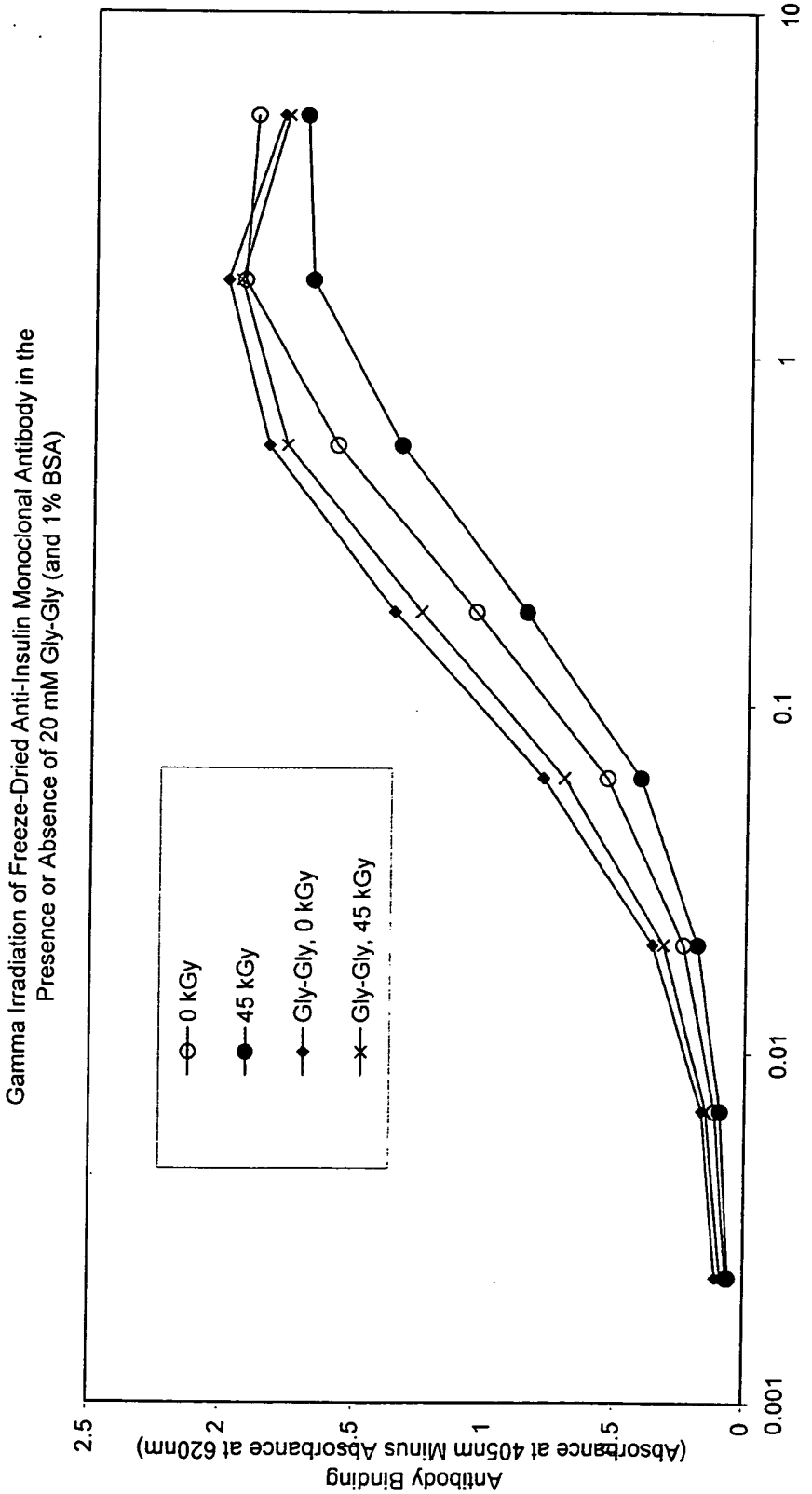


FIG. 19A

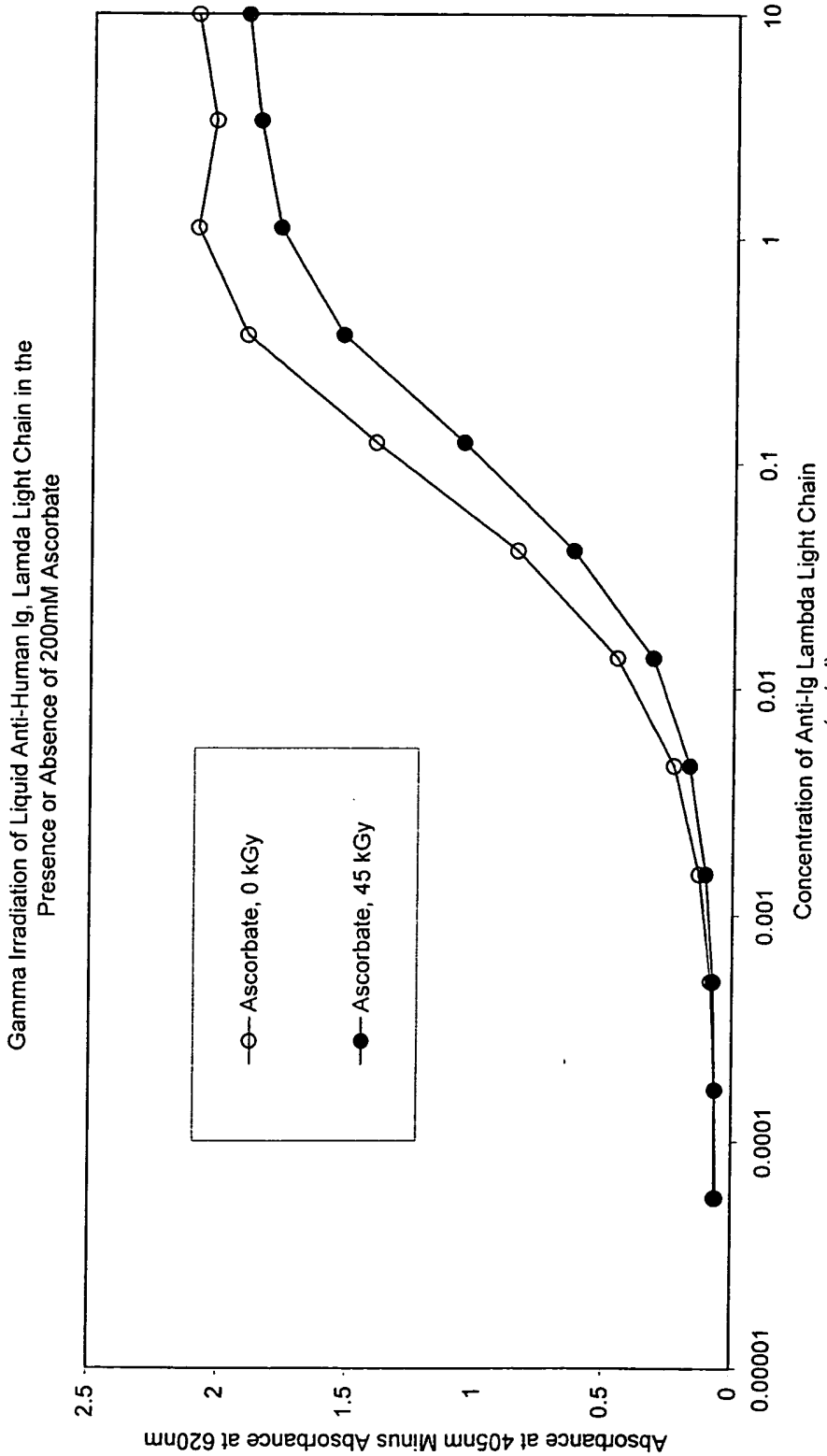


FIG. 2B

FIG. 19B

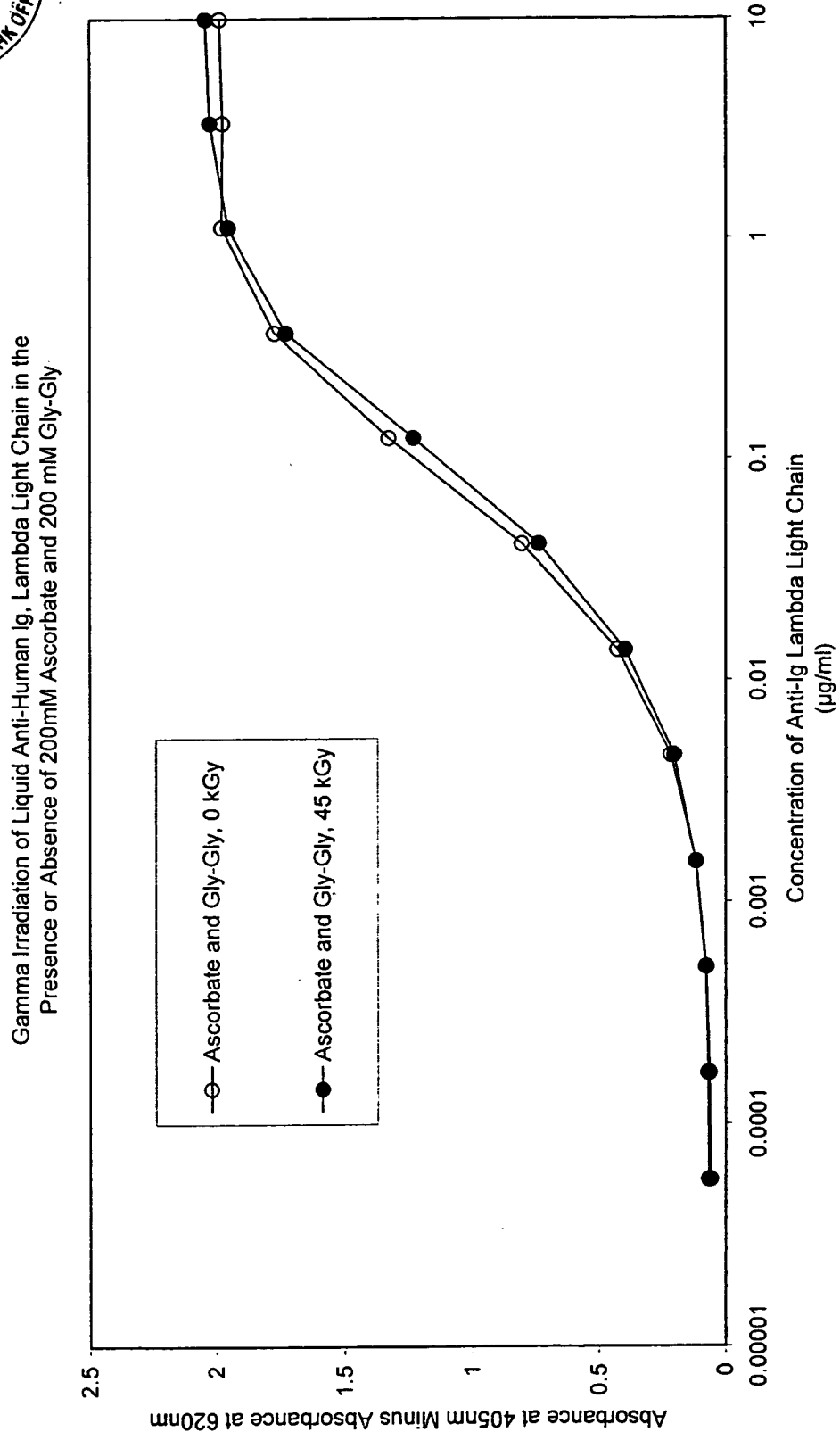


FIG. 19C

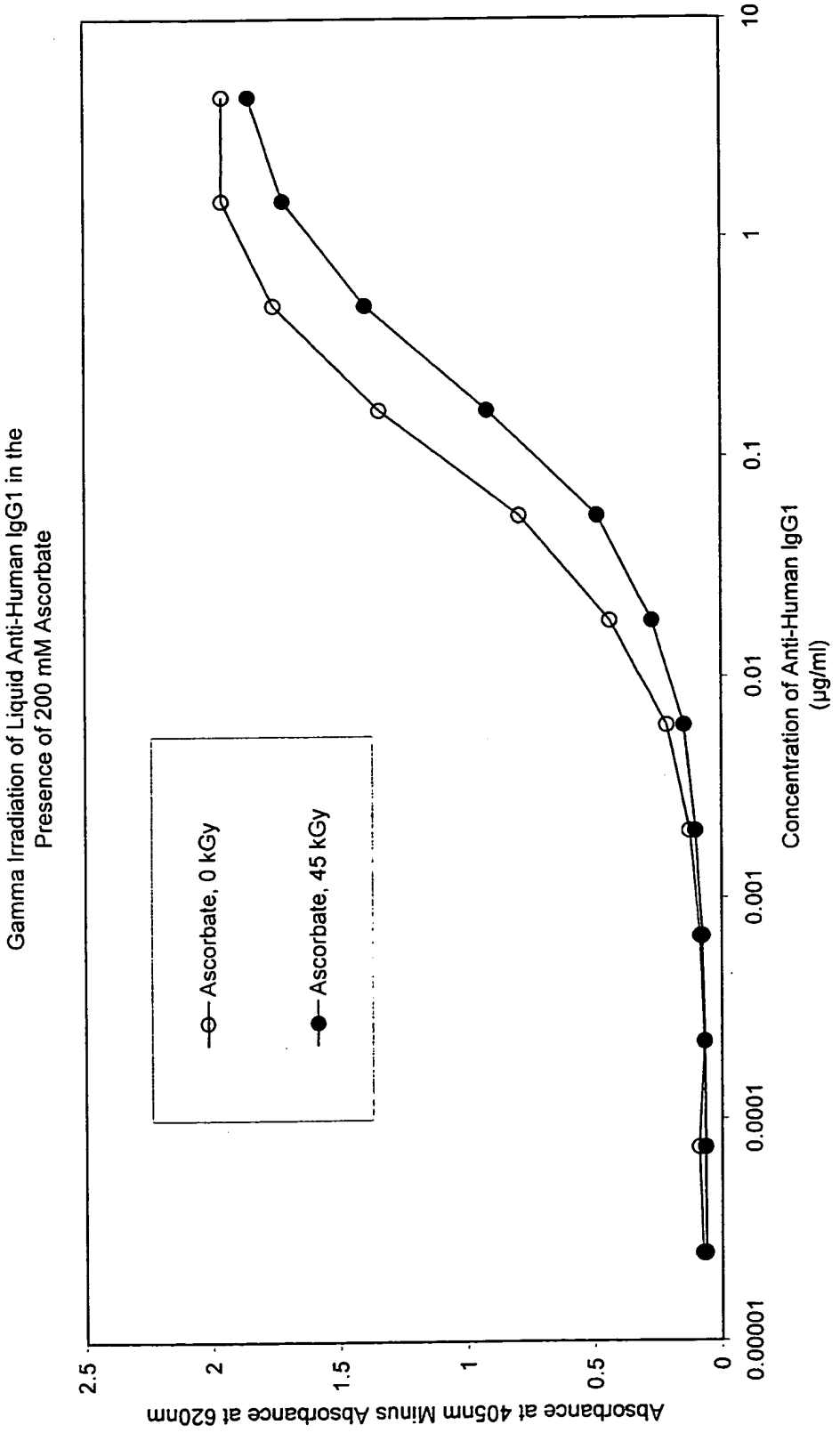


FIG. 19D

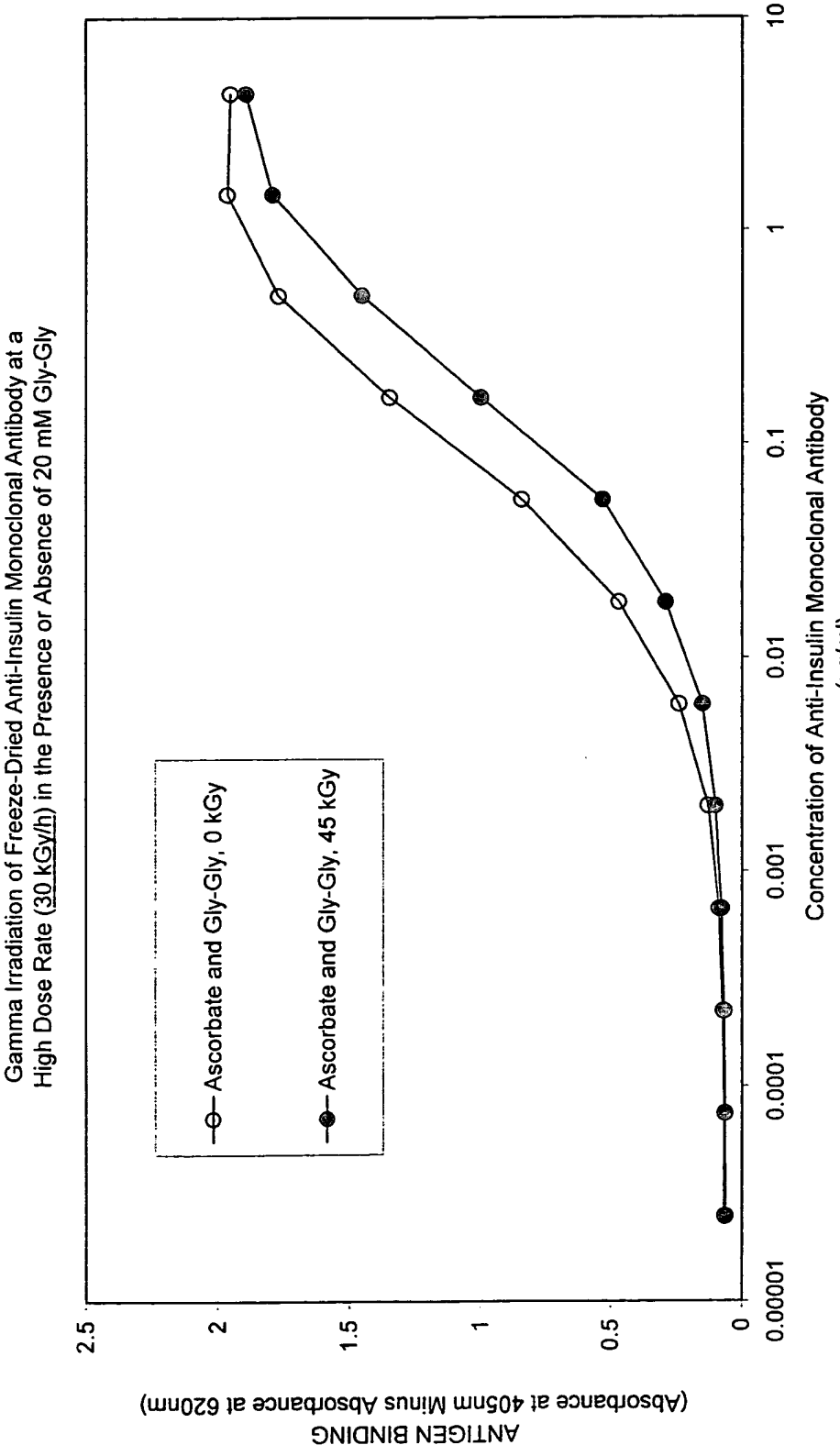


FIG. 19E

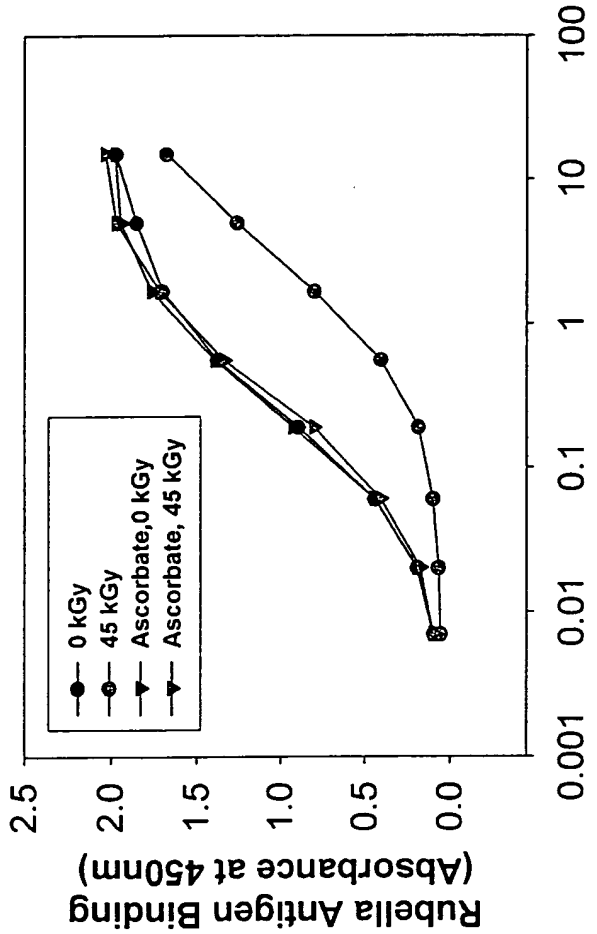


FIG. 20A

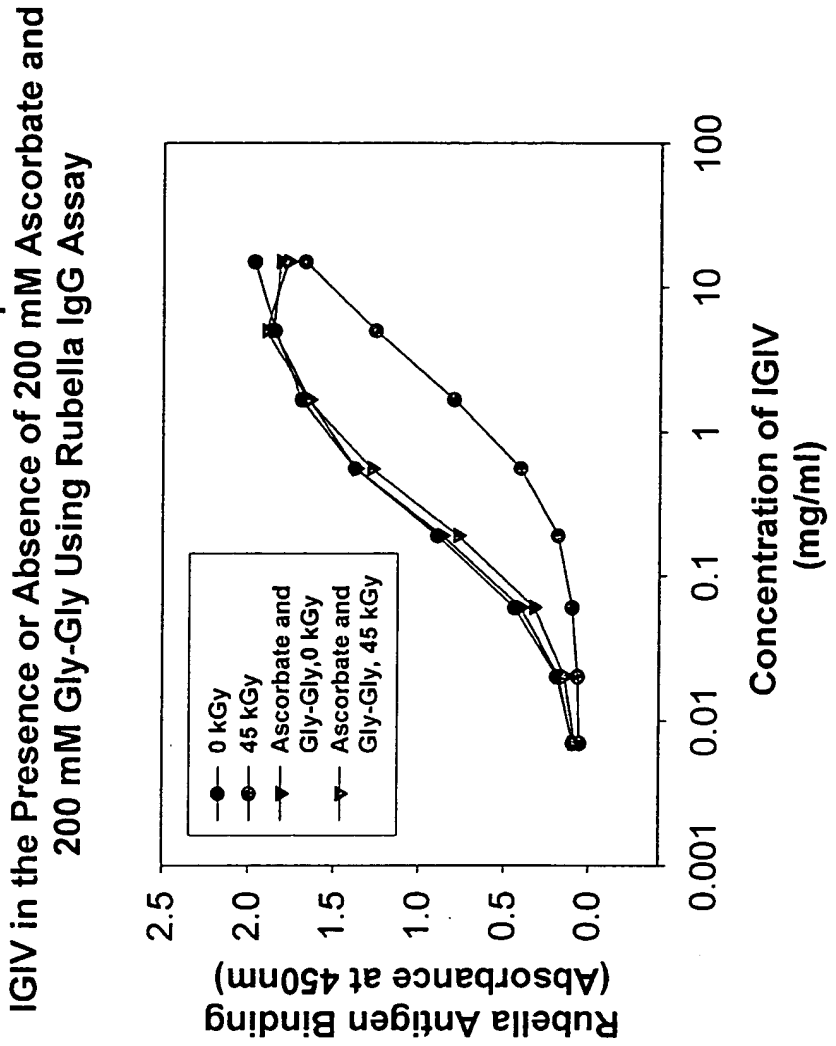


FIG. 20B

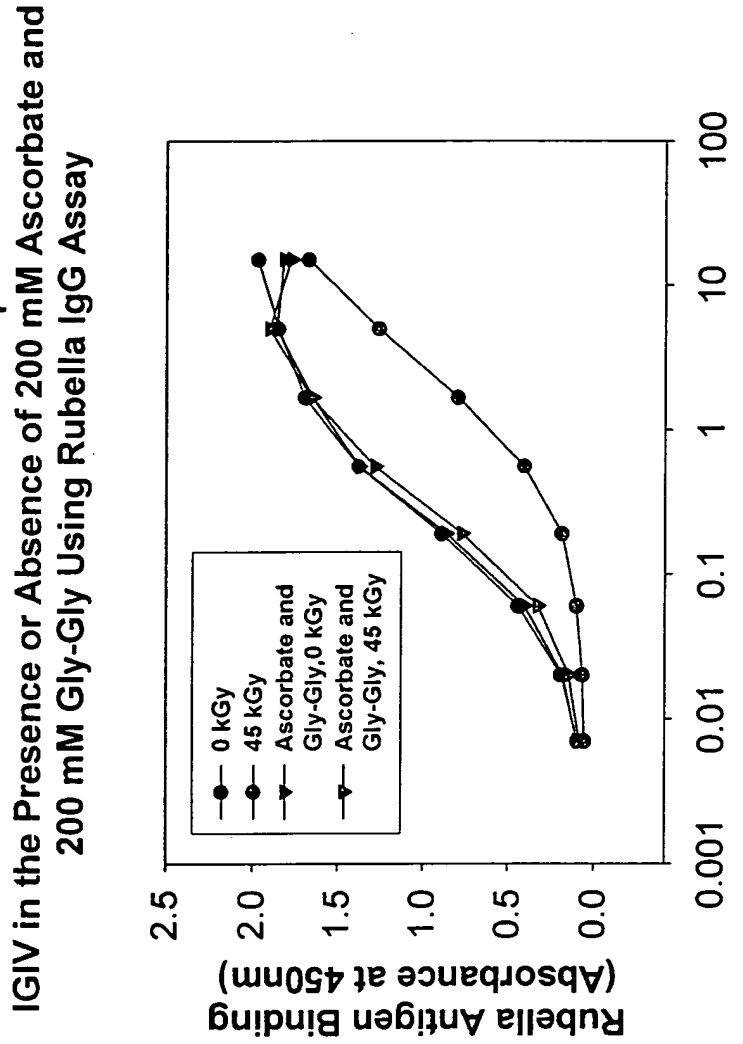


FIG. 20C

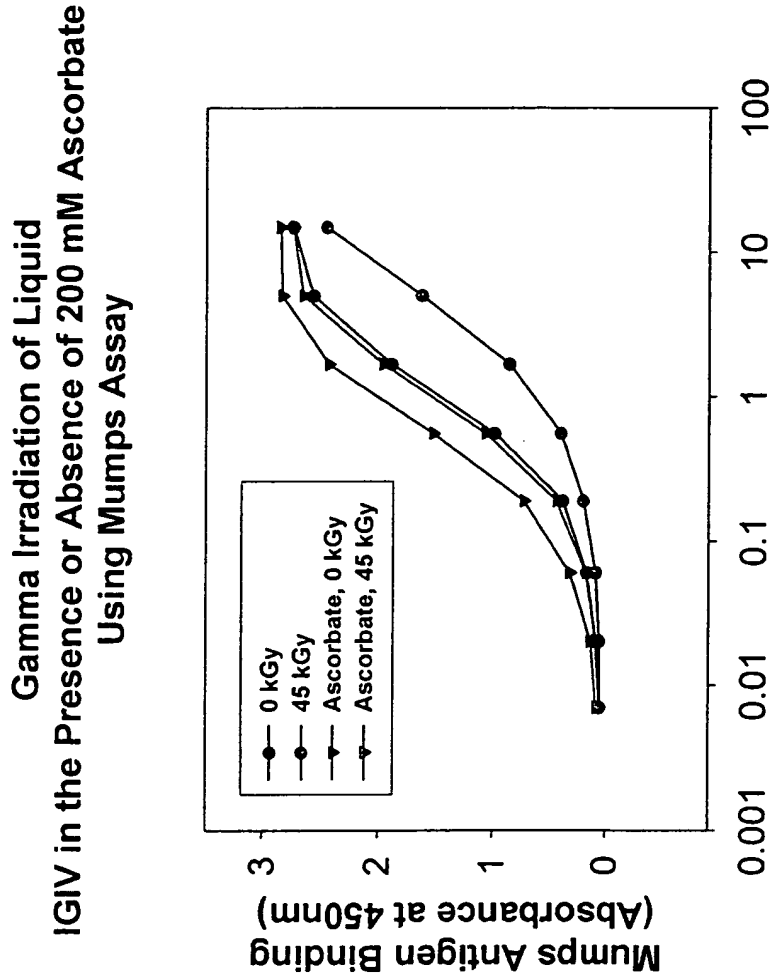


FIG. 20D

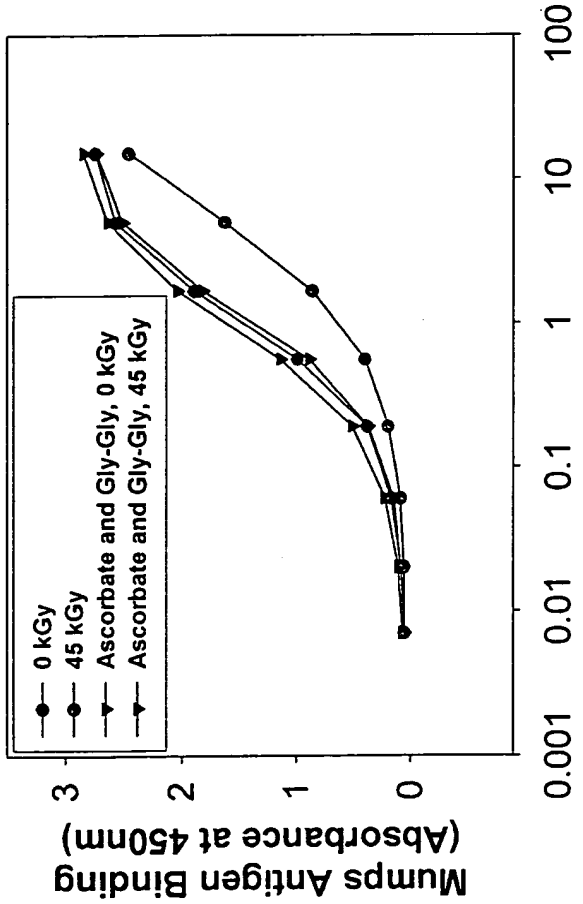


FIG. 20E

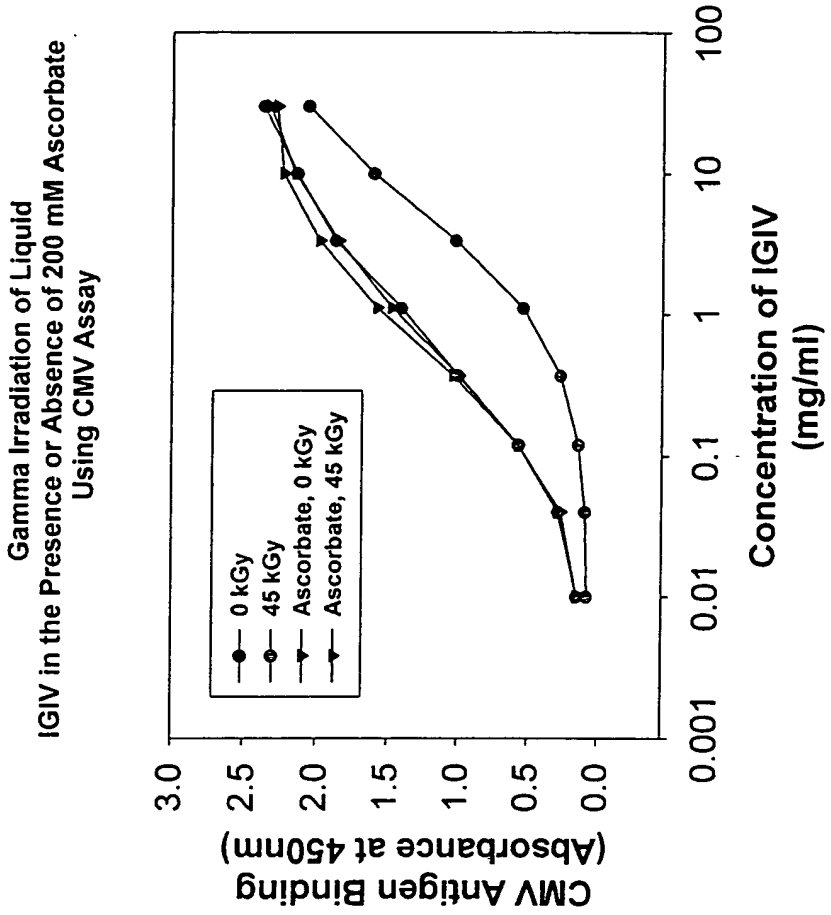


FIG. 20F

SDS-PAGE of Liquid IGIV

Liquid IGIV, Reduced 5-15%

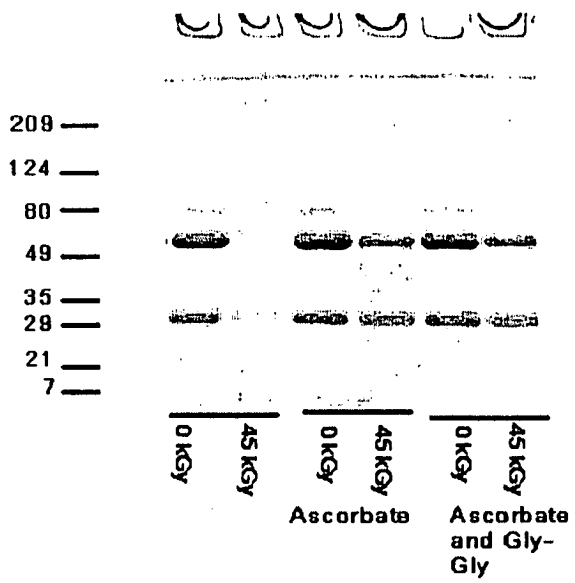


FIG. 20G

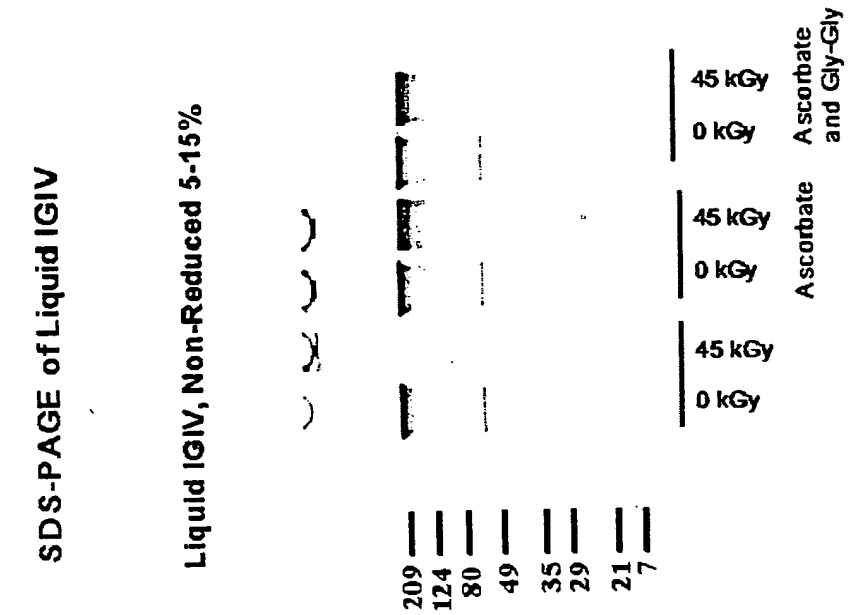


FIG. 20H

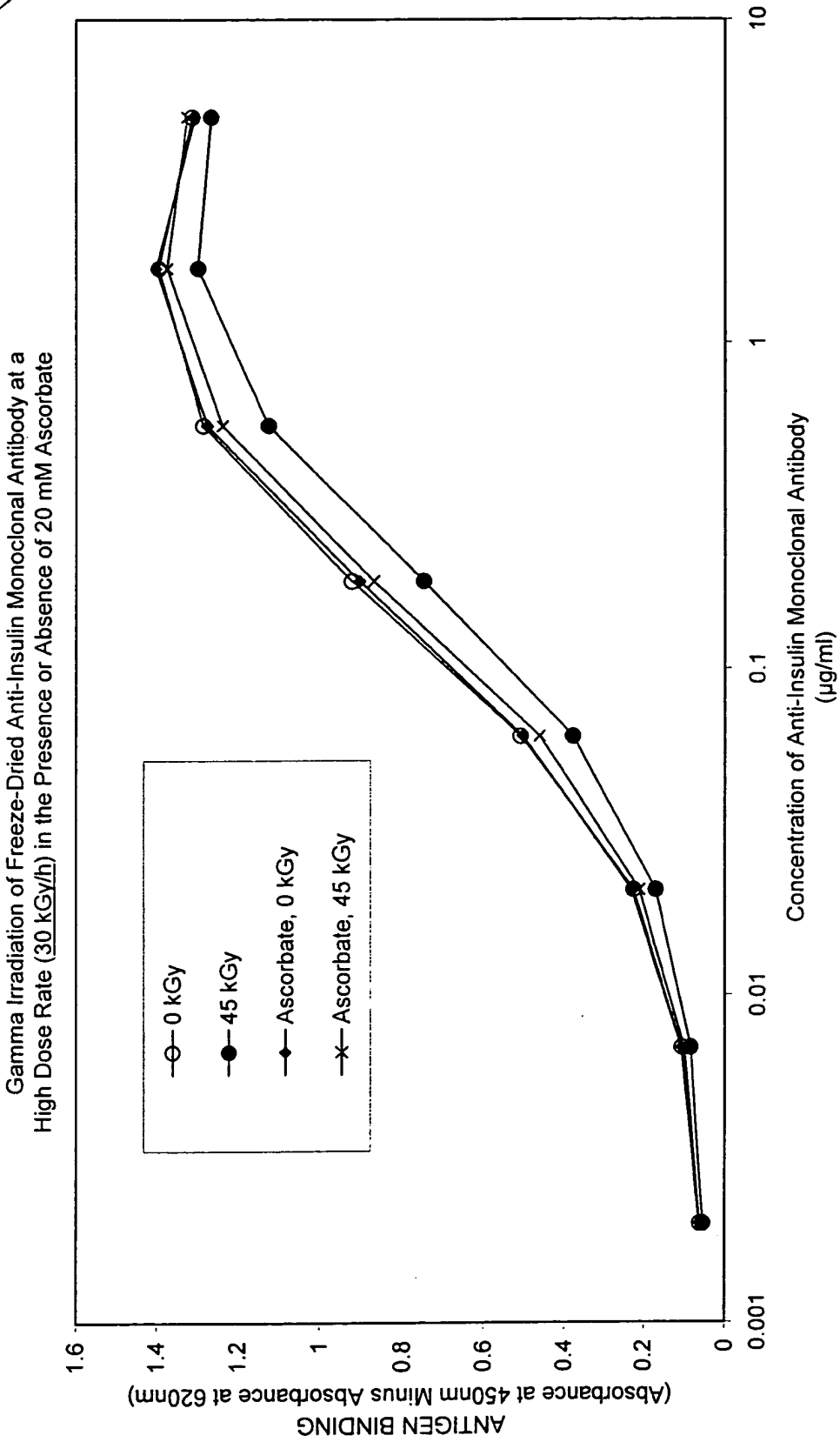


FIG. 21A

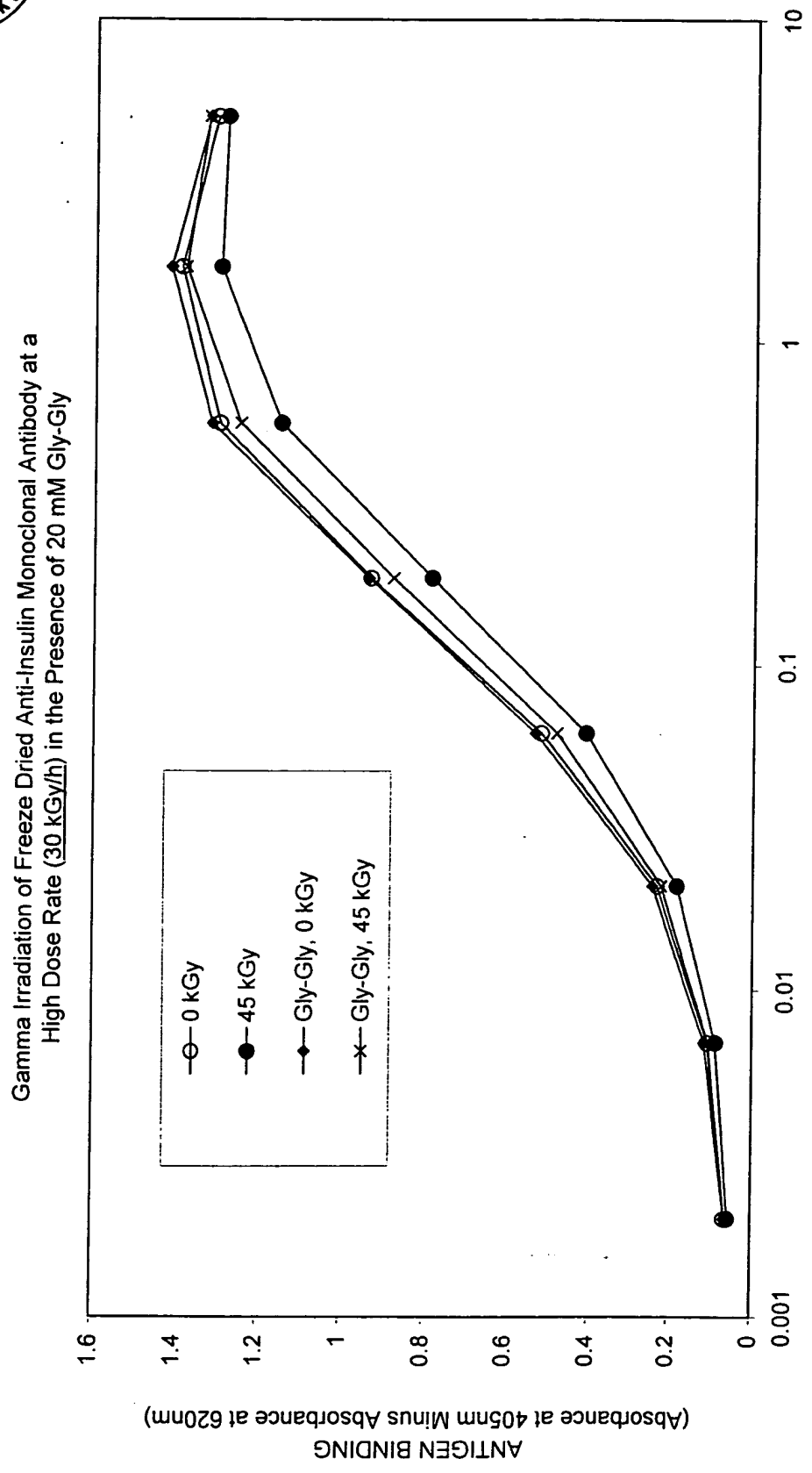


FIG. 21B

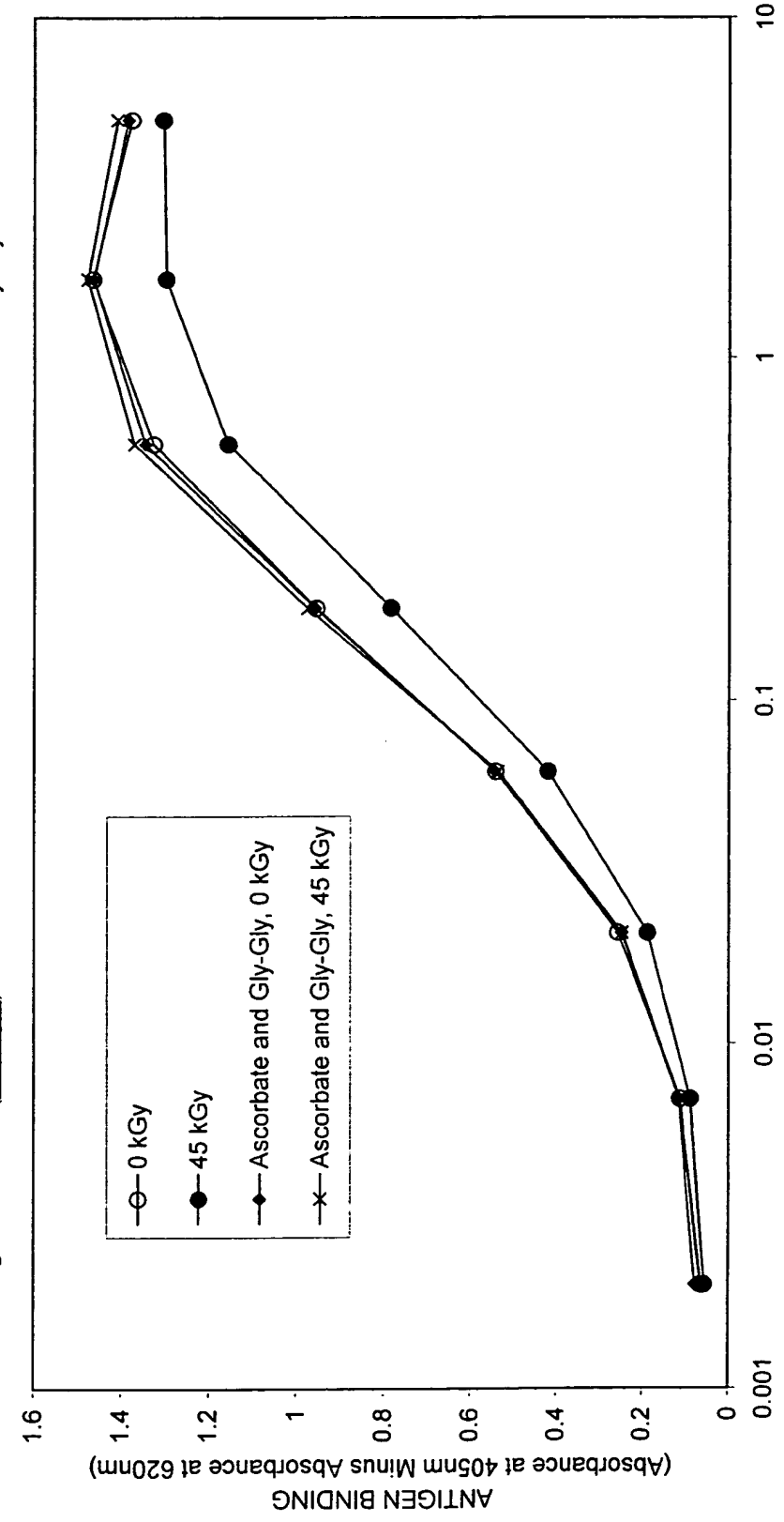


FIG. 21C

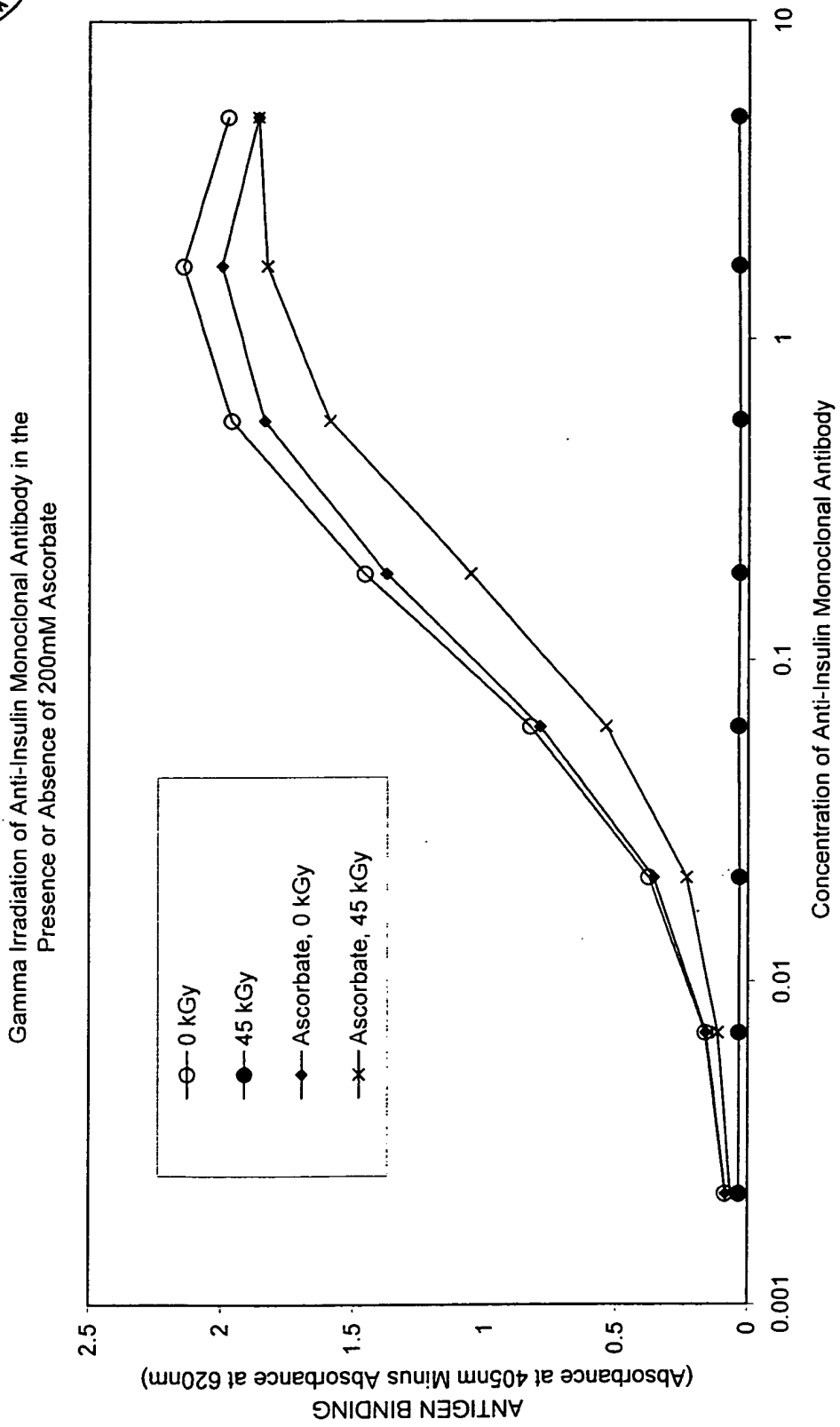


FIG. 22A

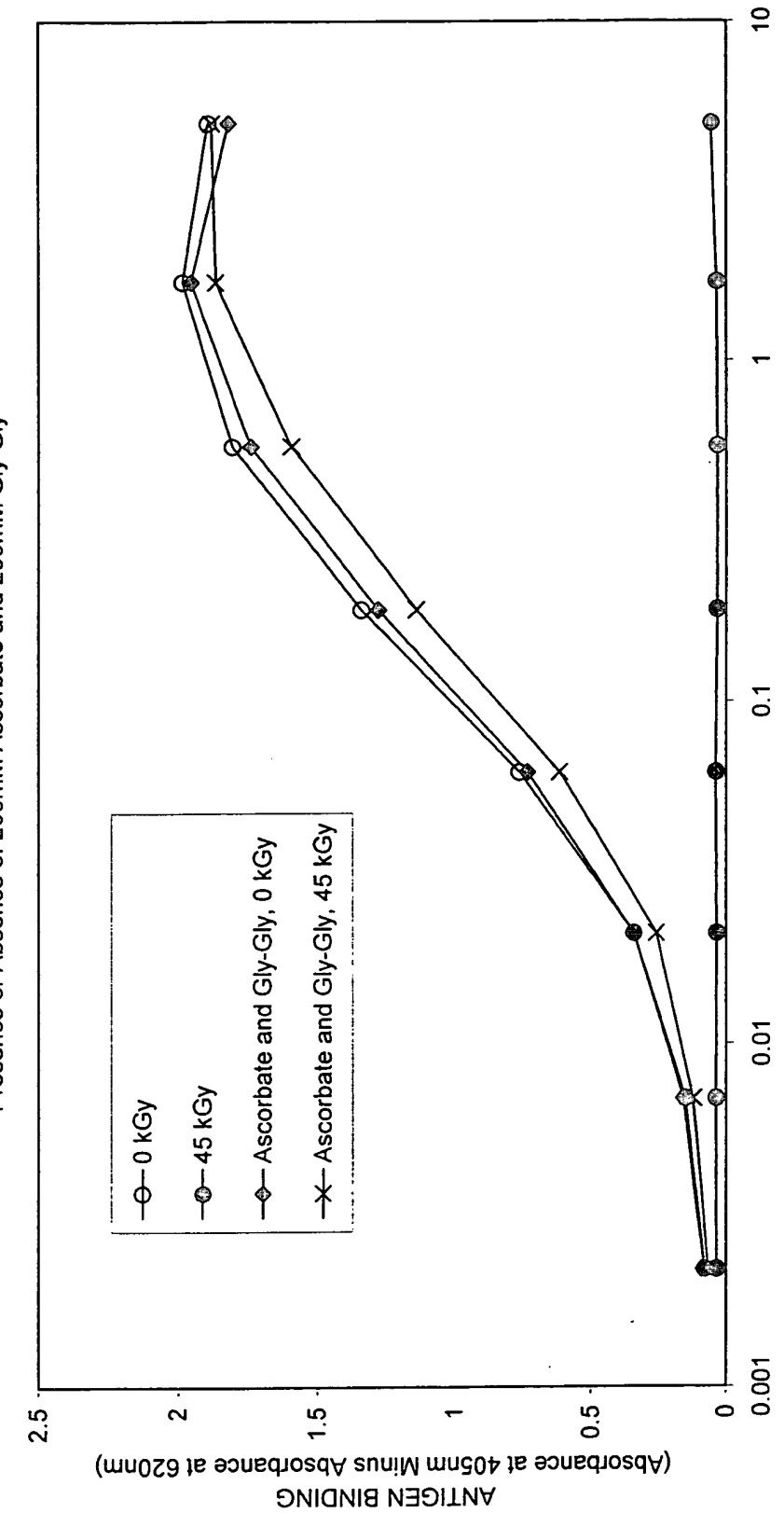


FIG. 22B

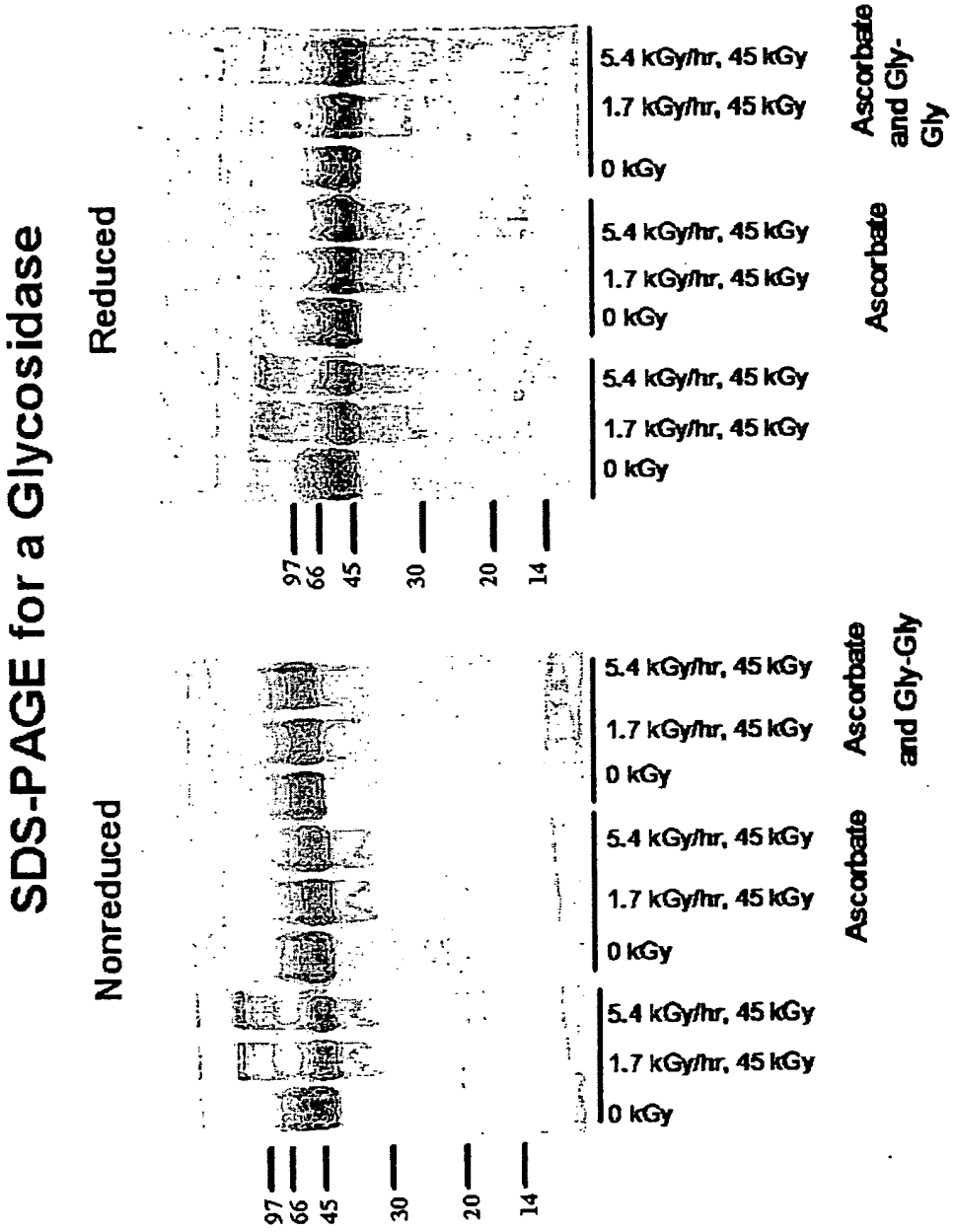


FIG. 23A

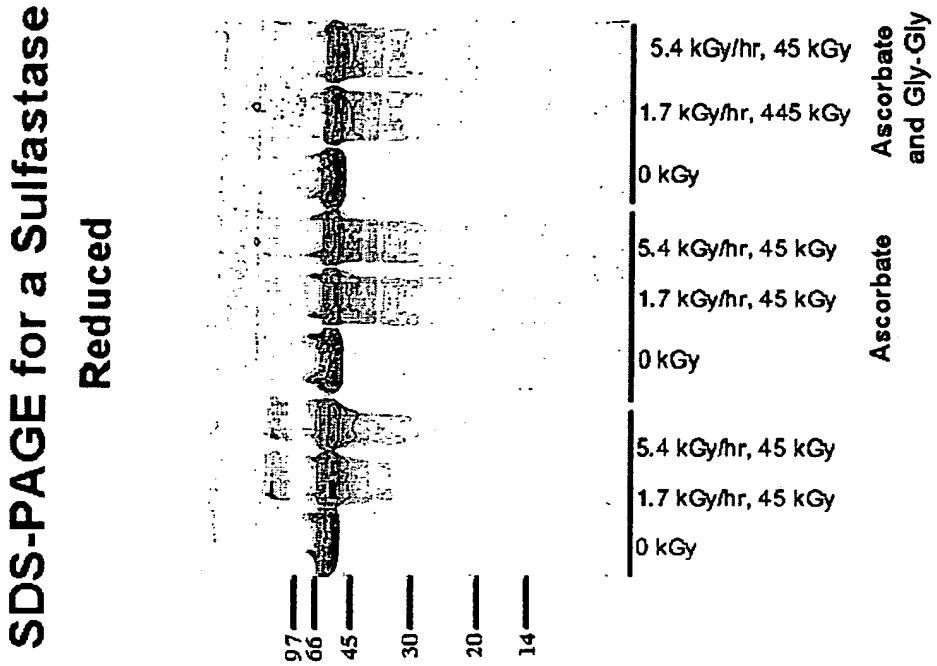


FIG. 23B

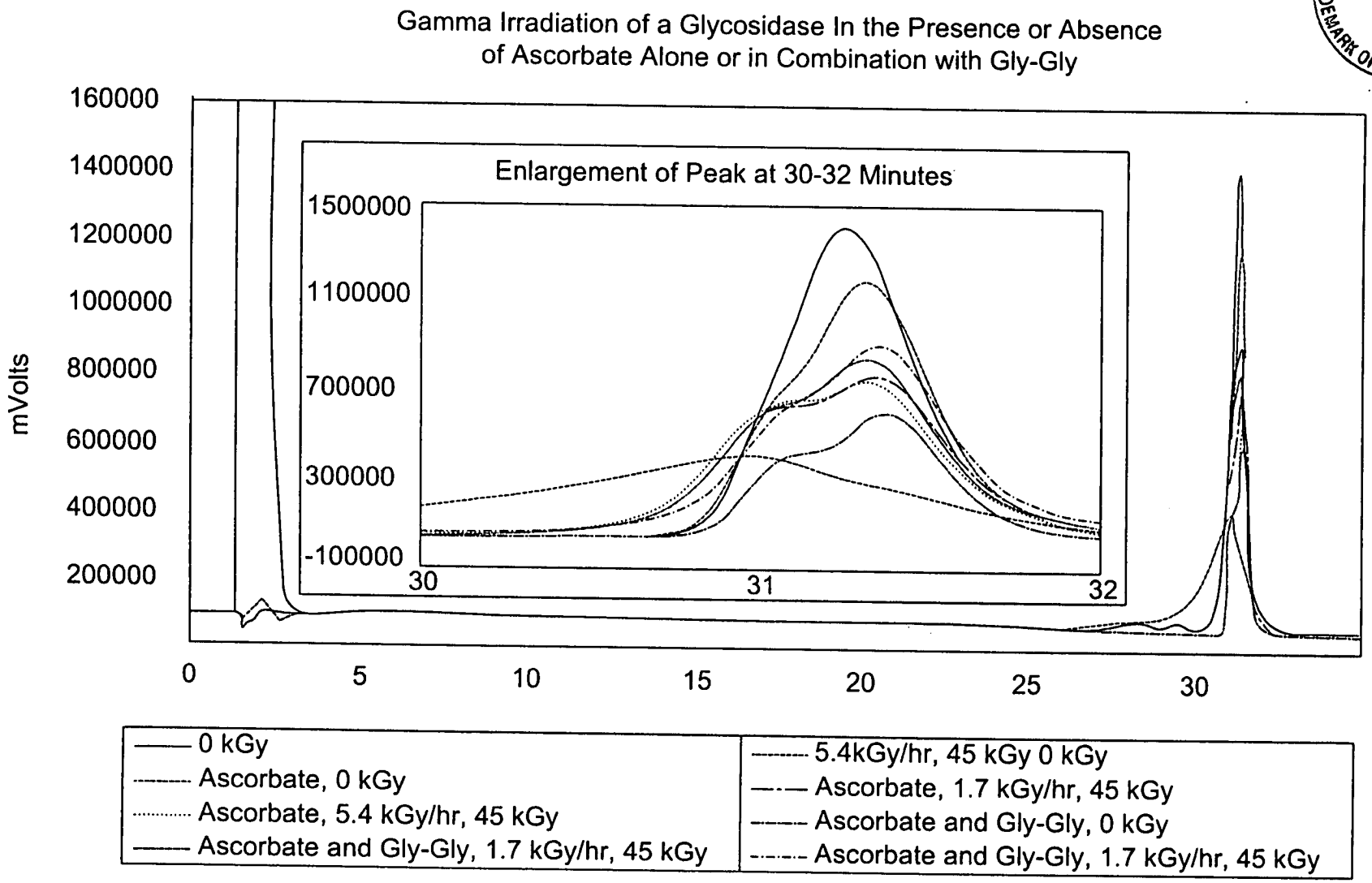


FIG. 24

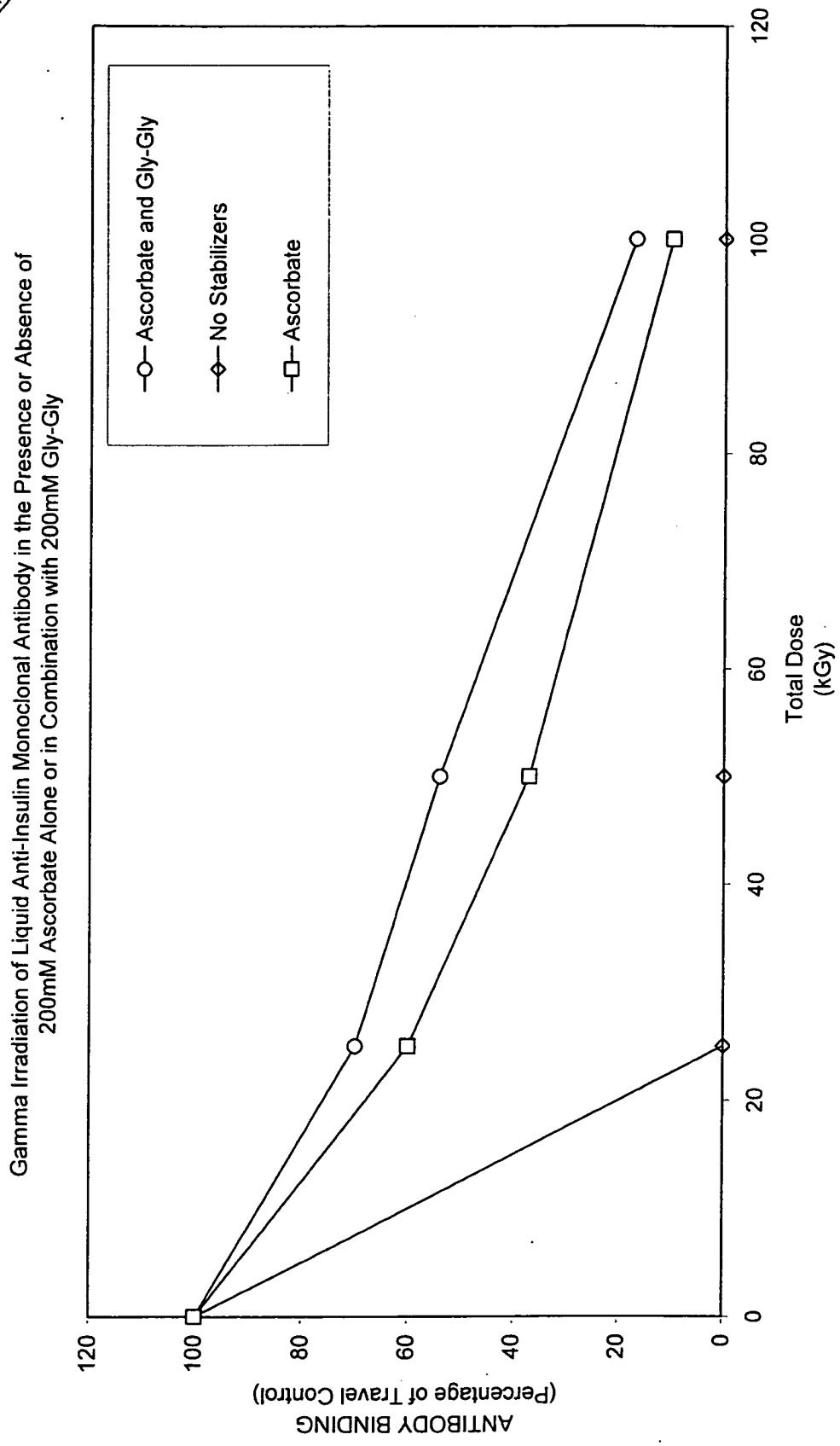


FIG. 25

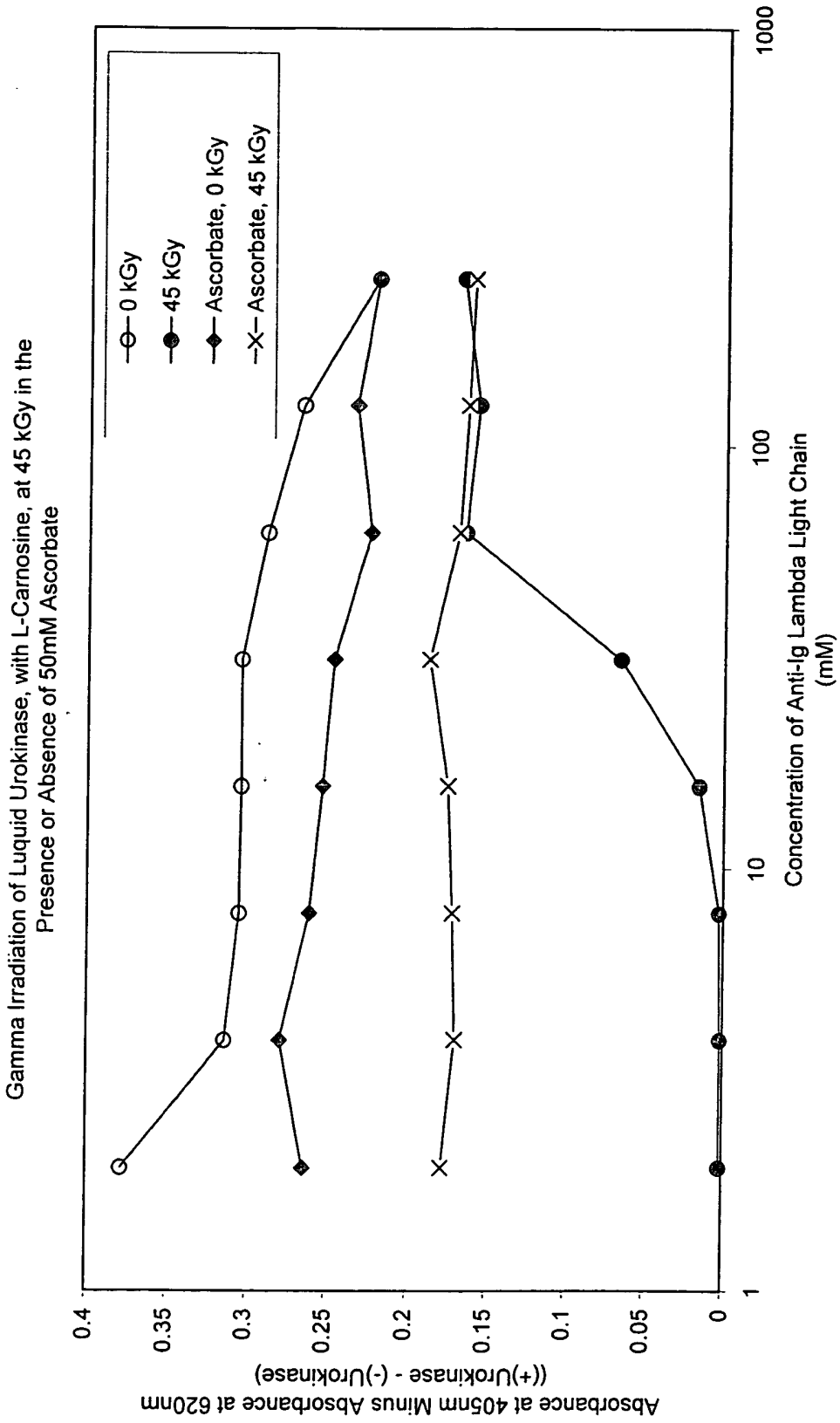


FIG. 26

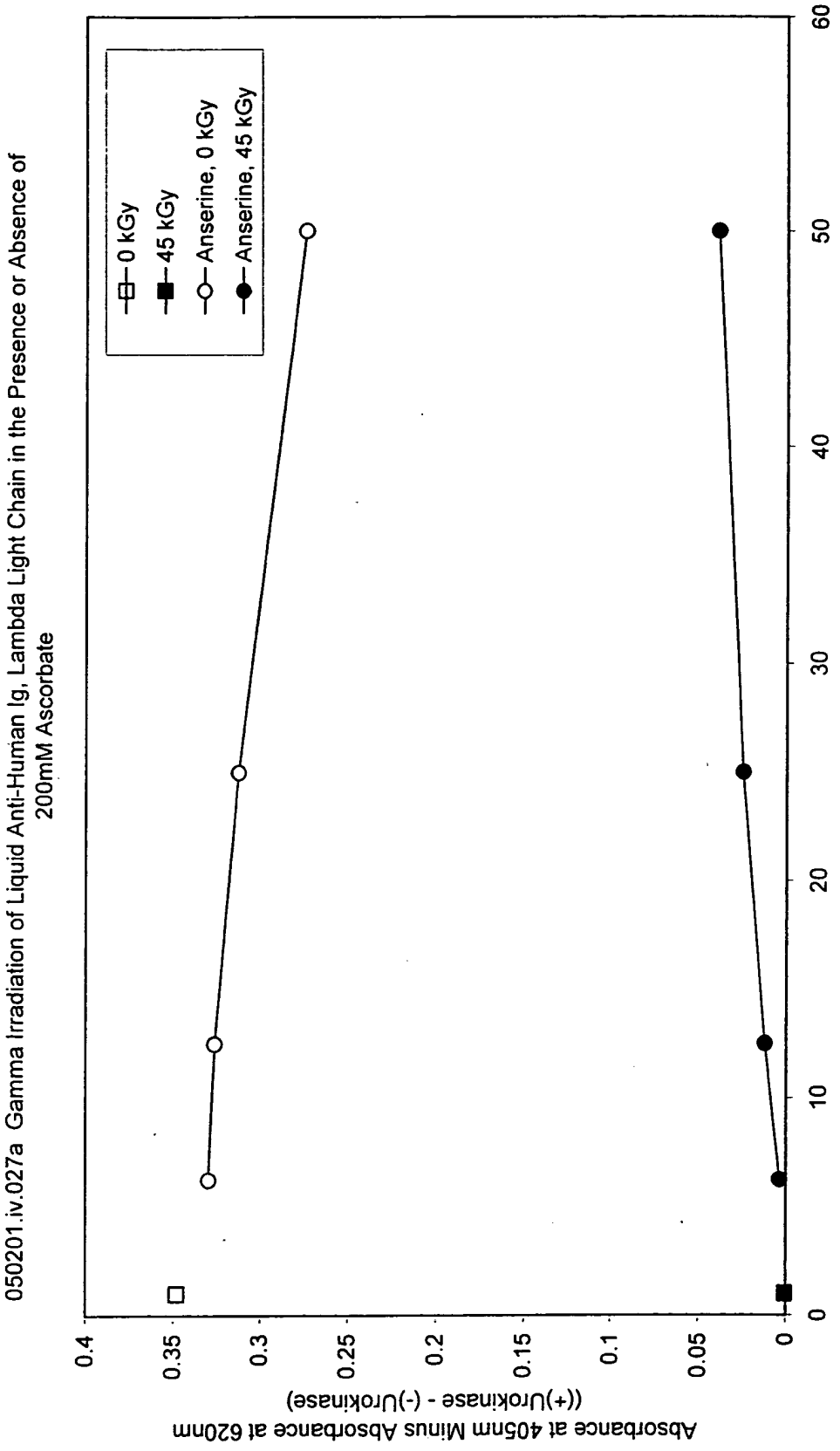


FIG. 27

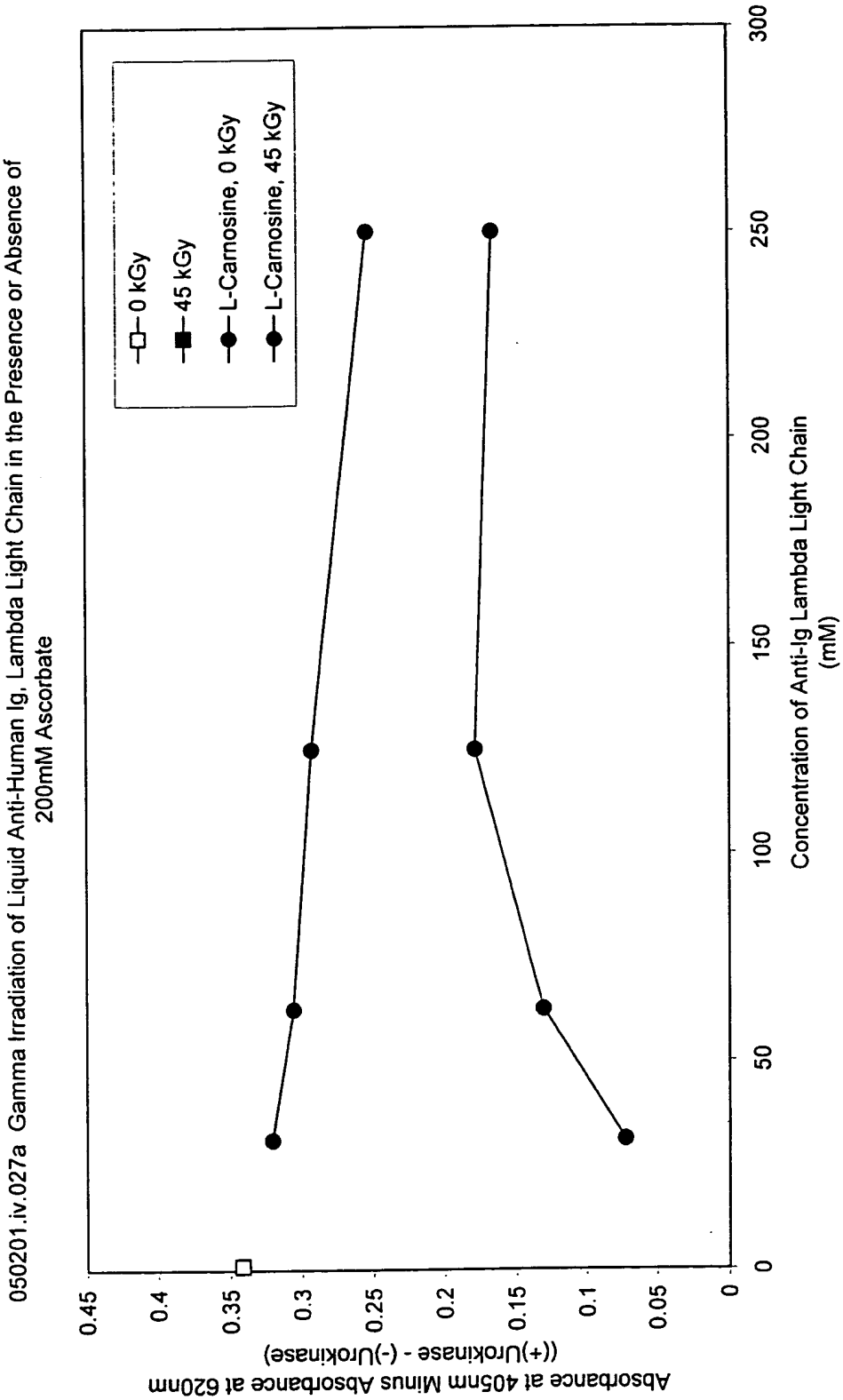


FIG. 28

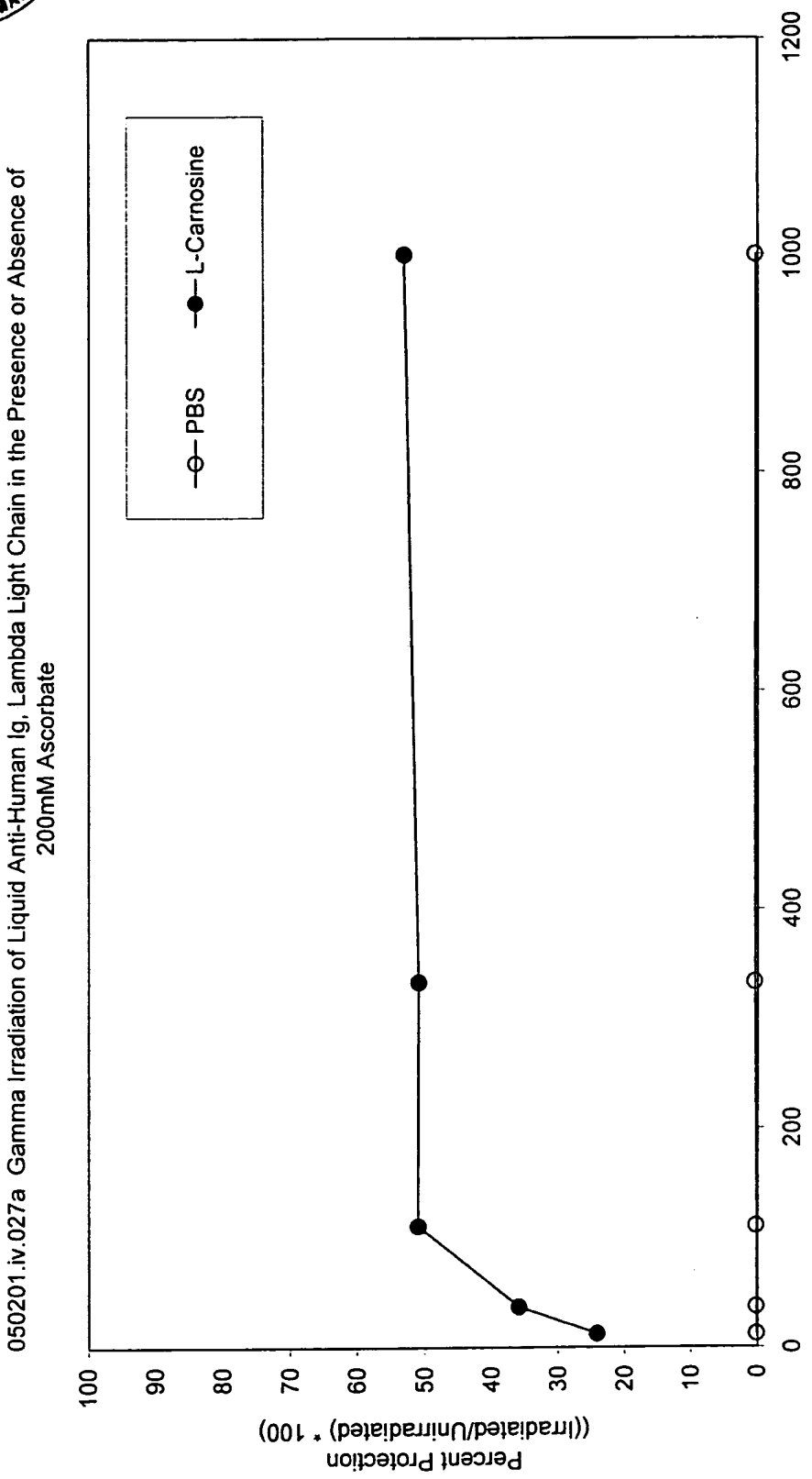


FIG. 29

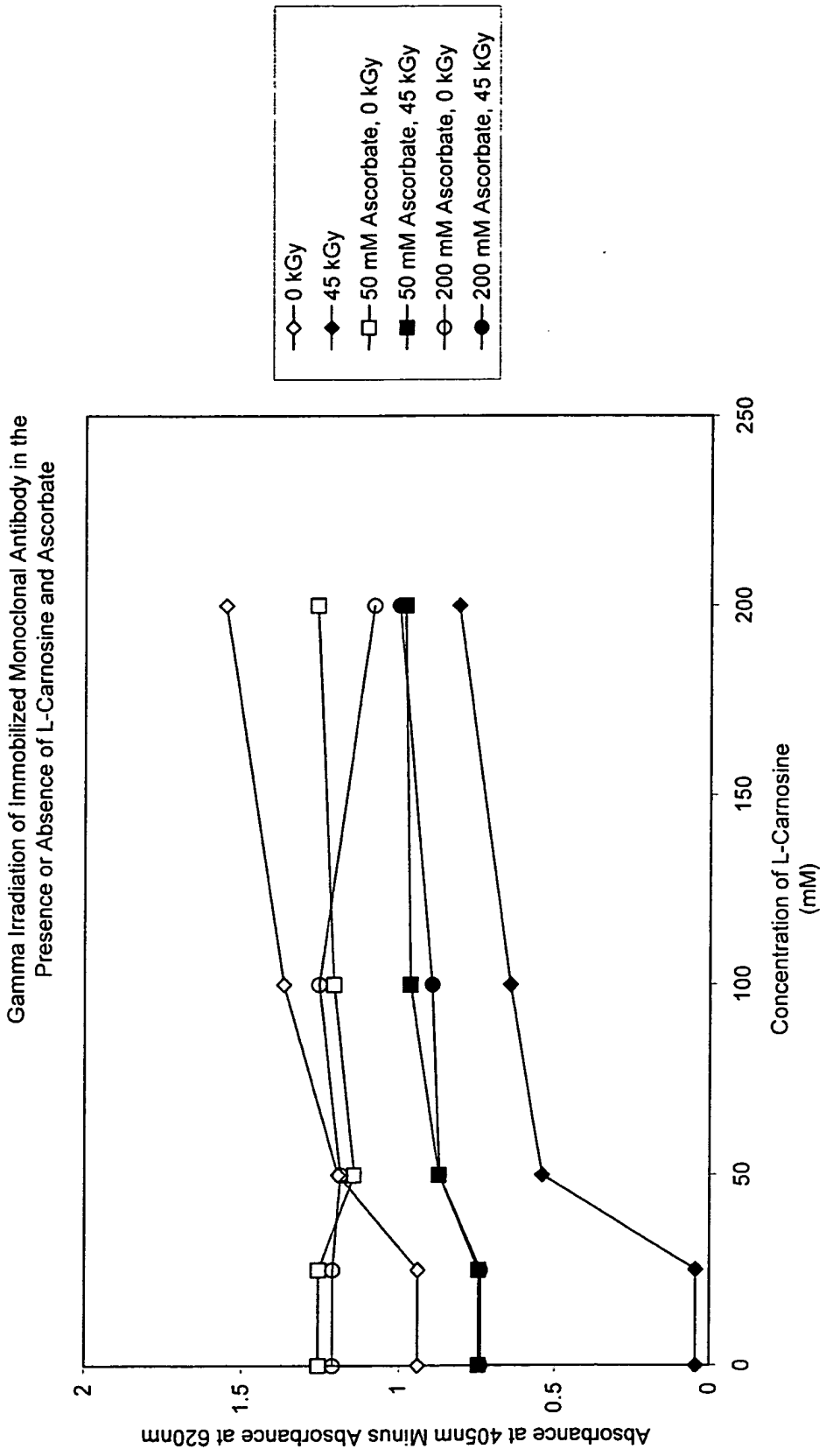


FIG. 30

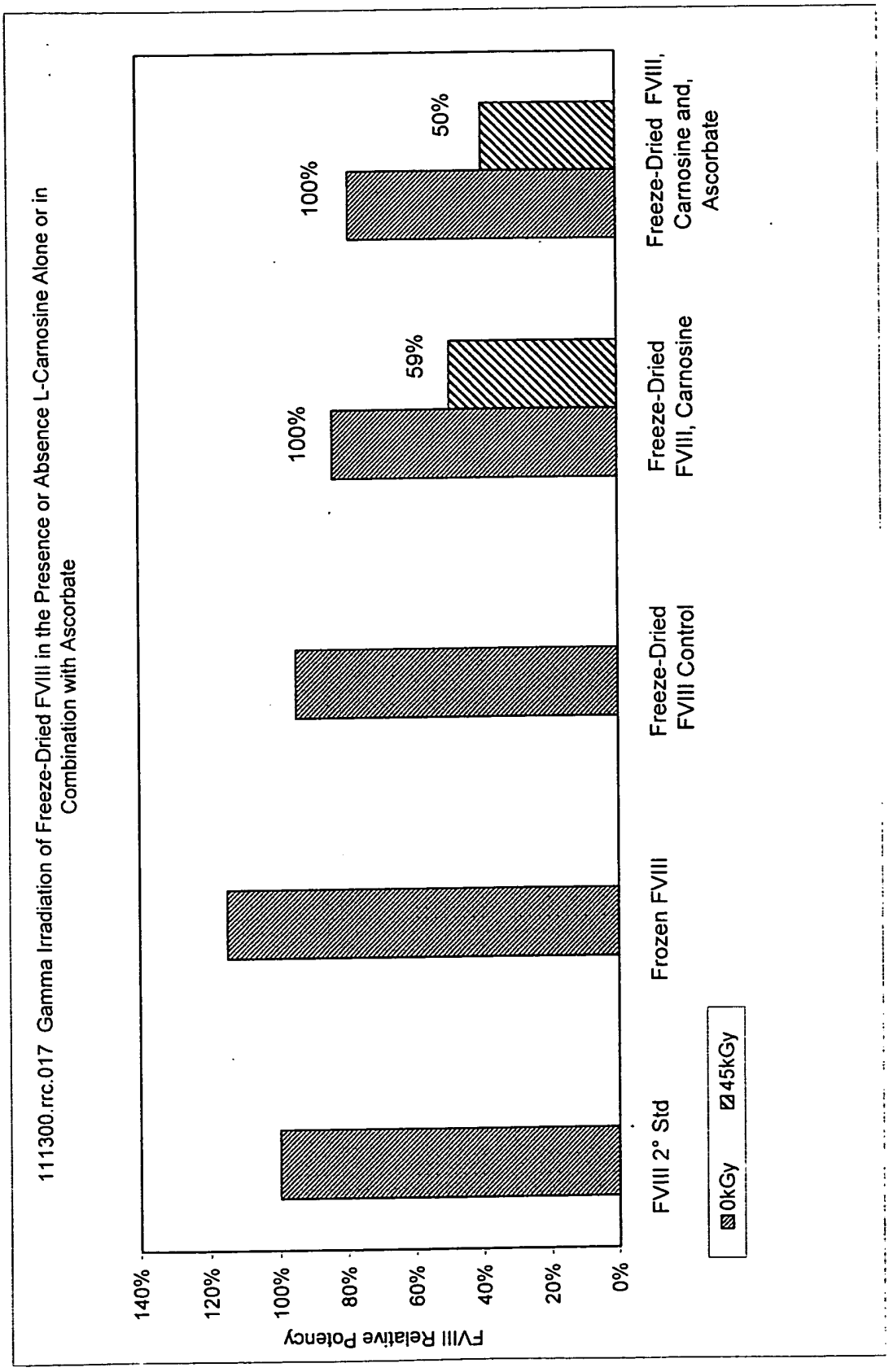


FIG. 31

Gamma Irradiation of Dried and Powder PPF

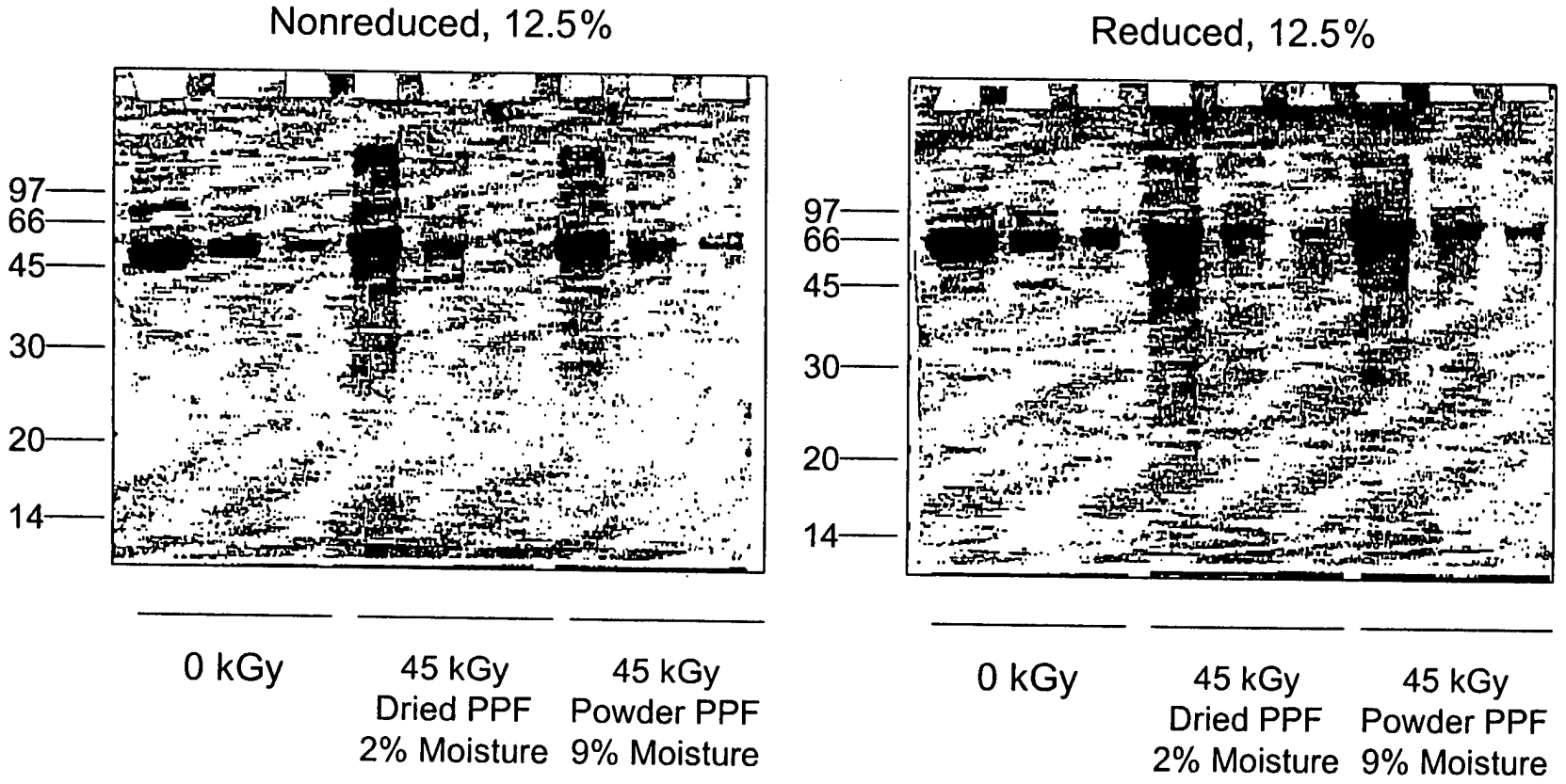


FIG. 32A

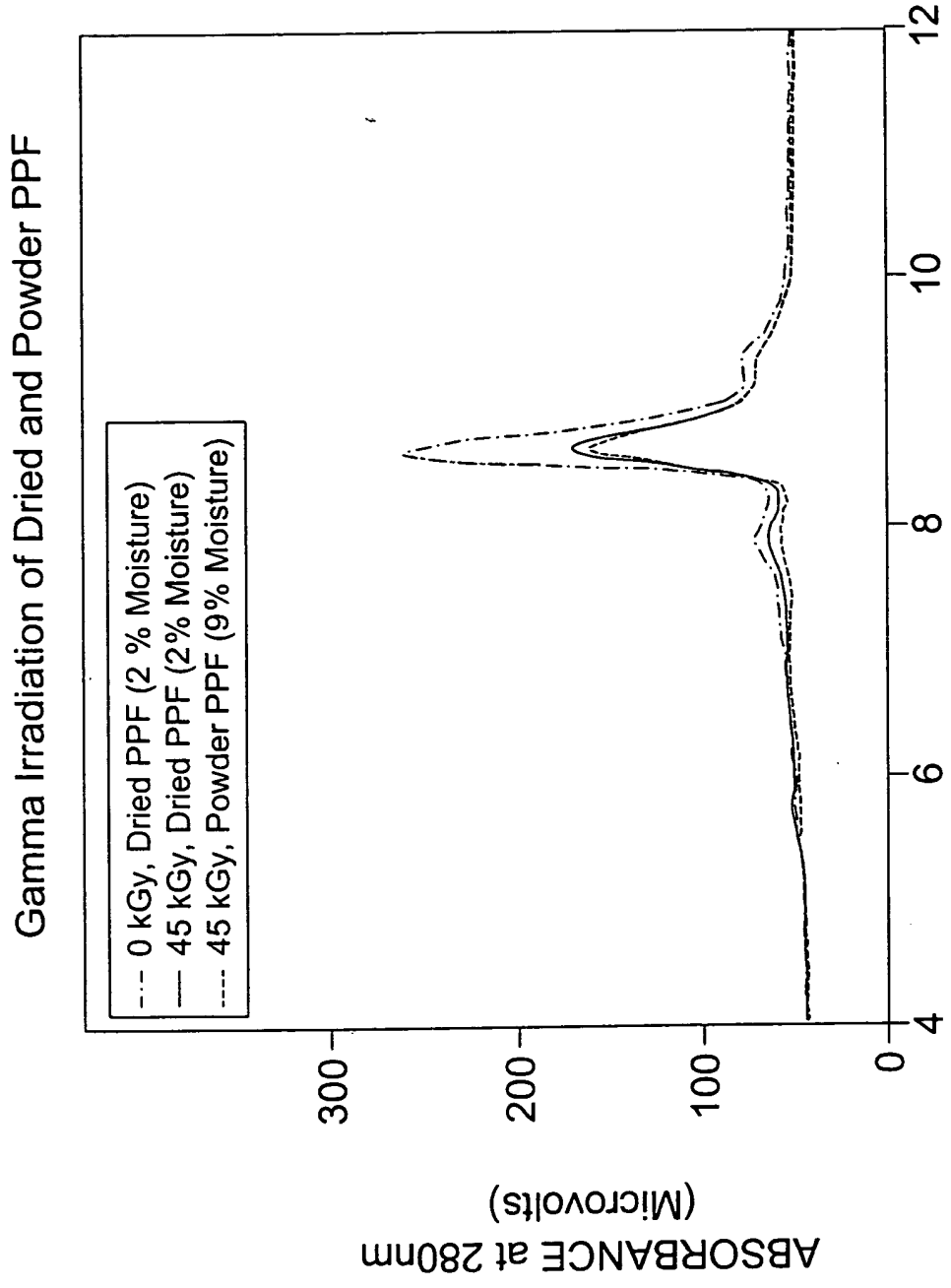


FIG. 32B

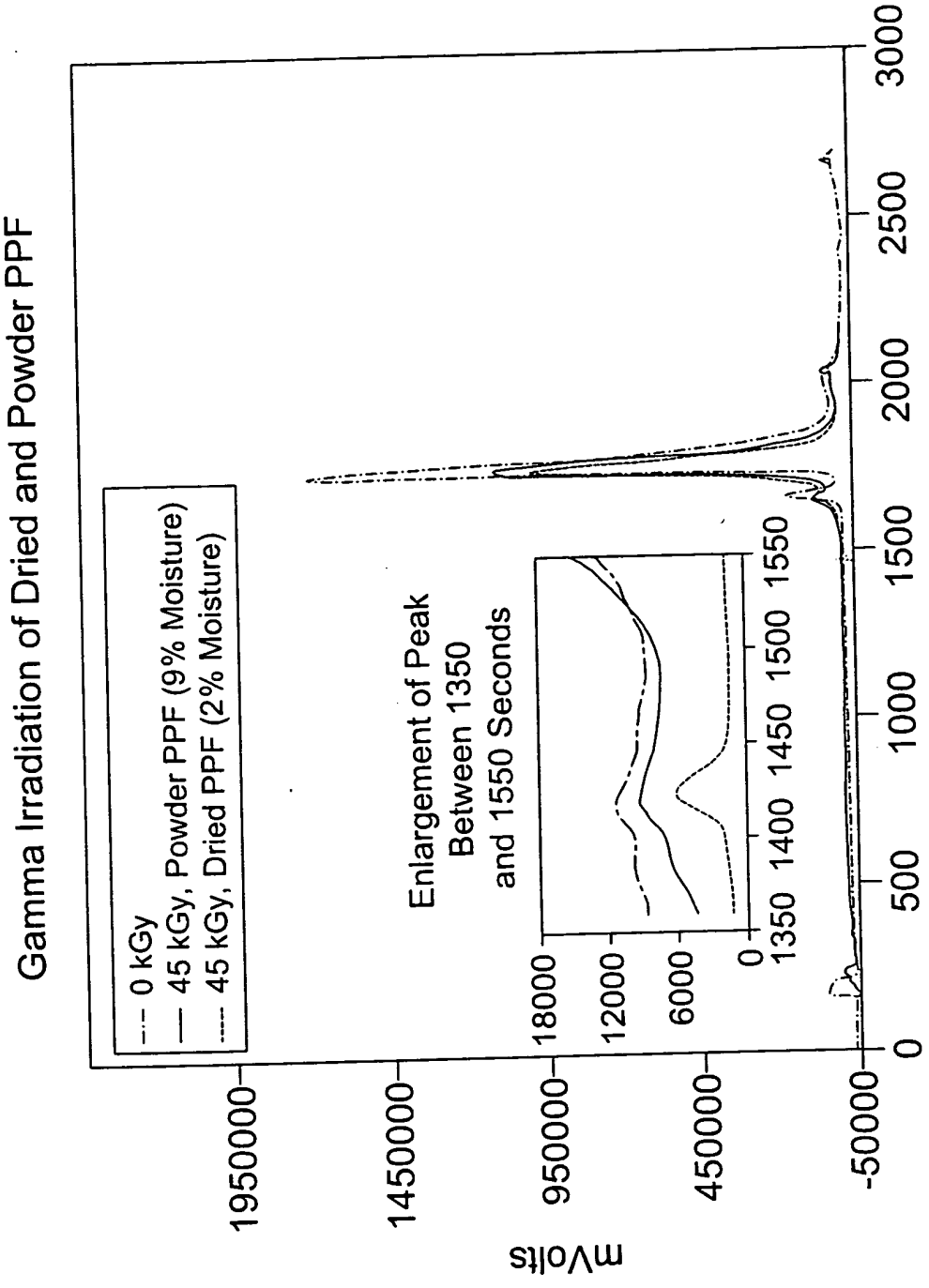


FIG. 32C

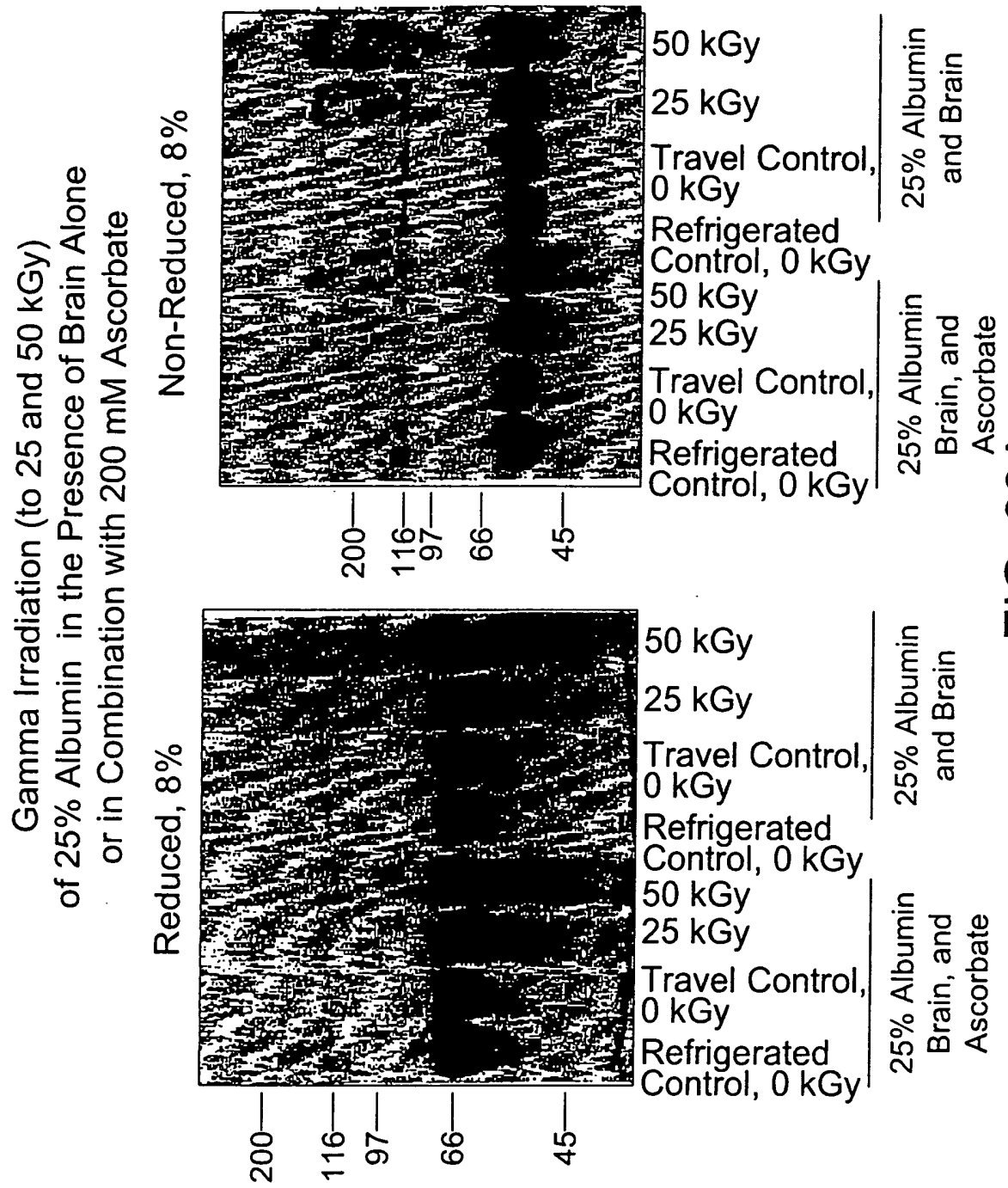


FIG. 33A

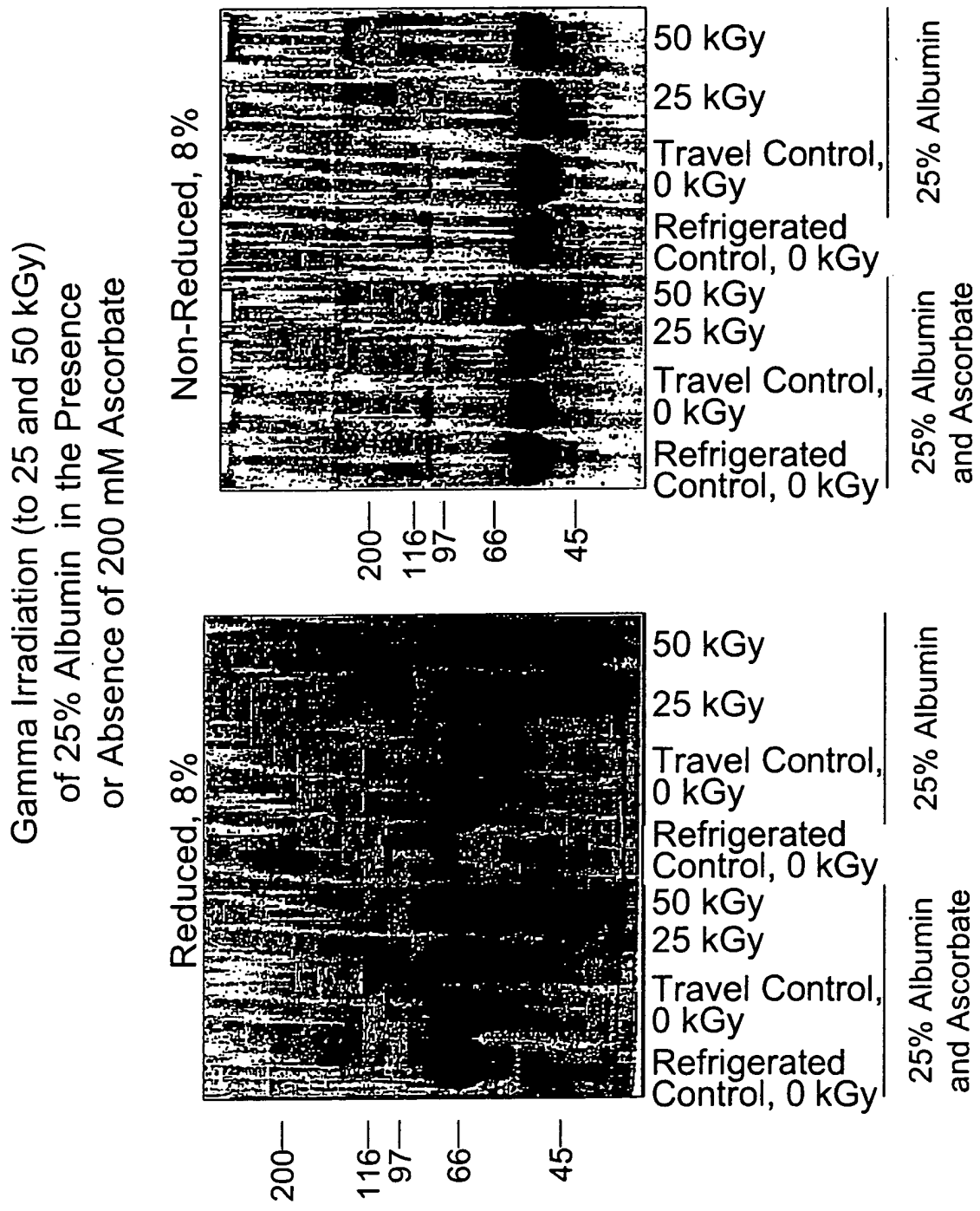


FIG. 33B

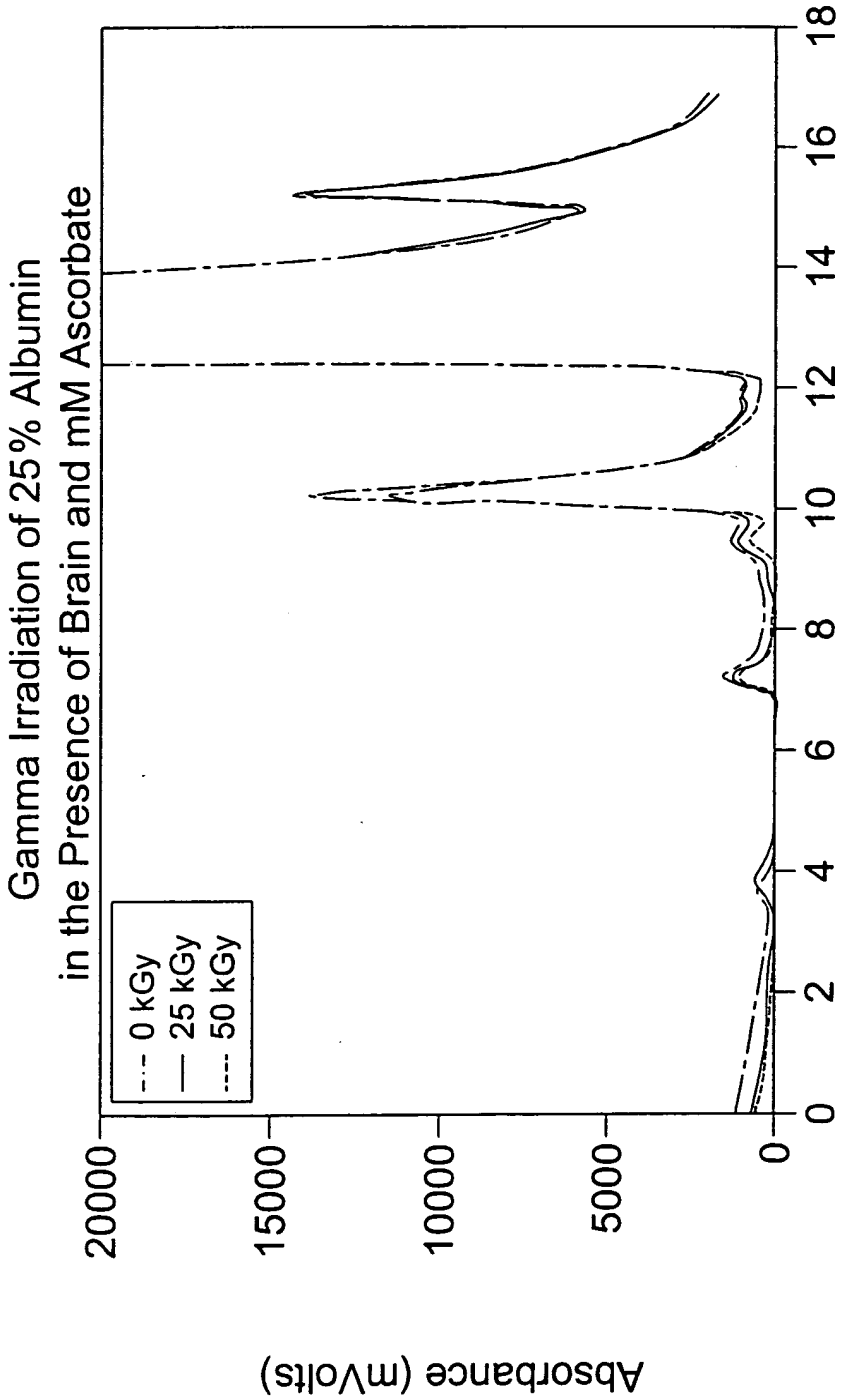


FIG. 33C

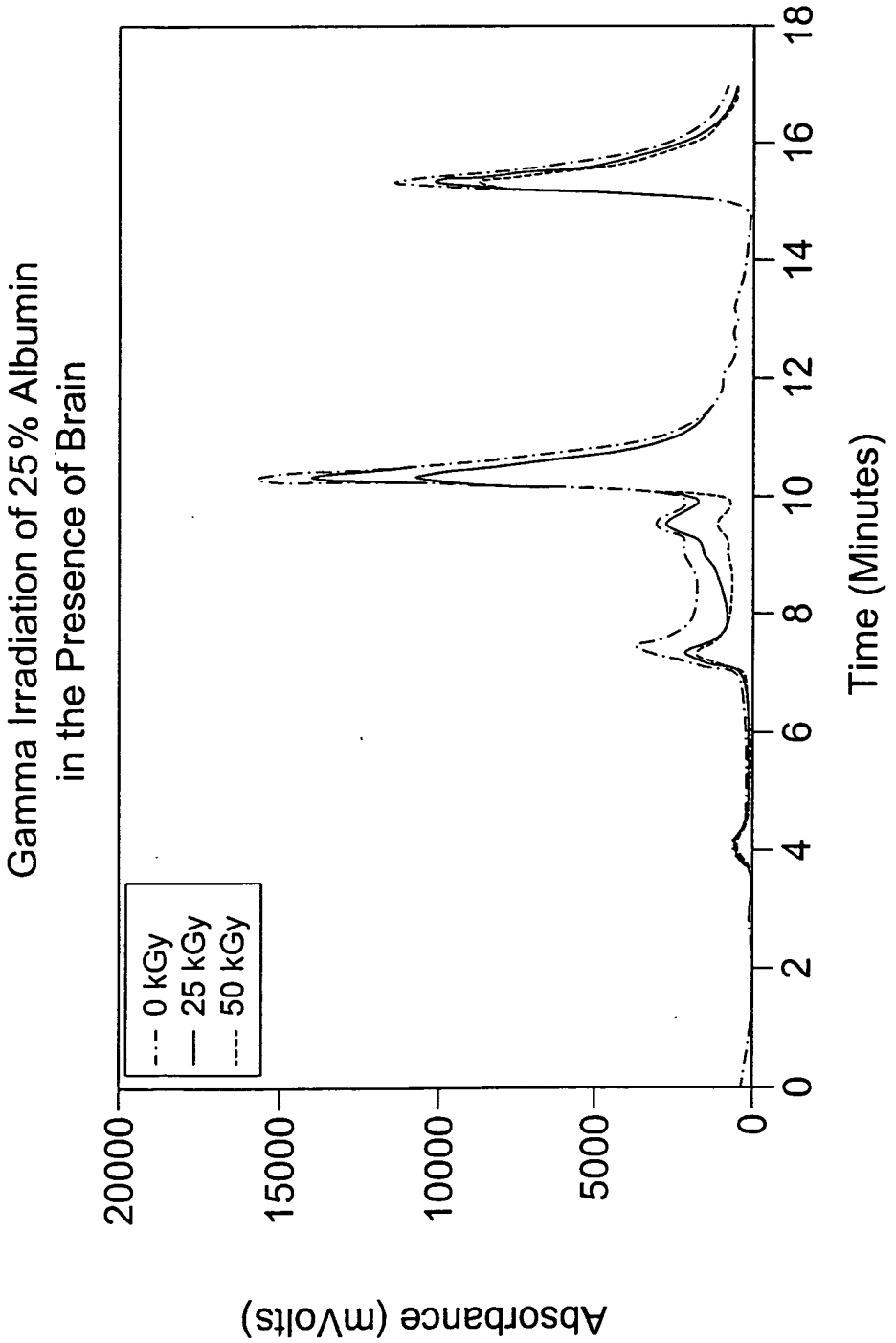


FIG. 33D

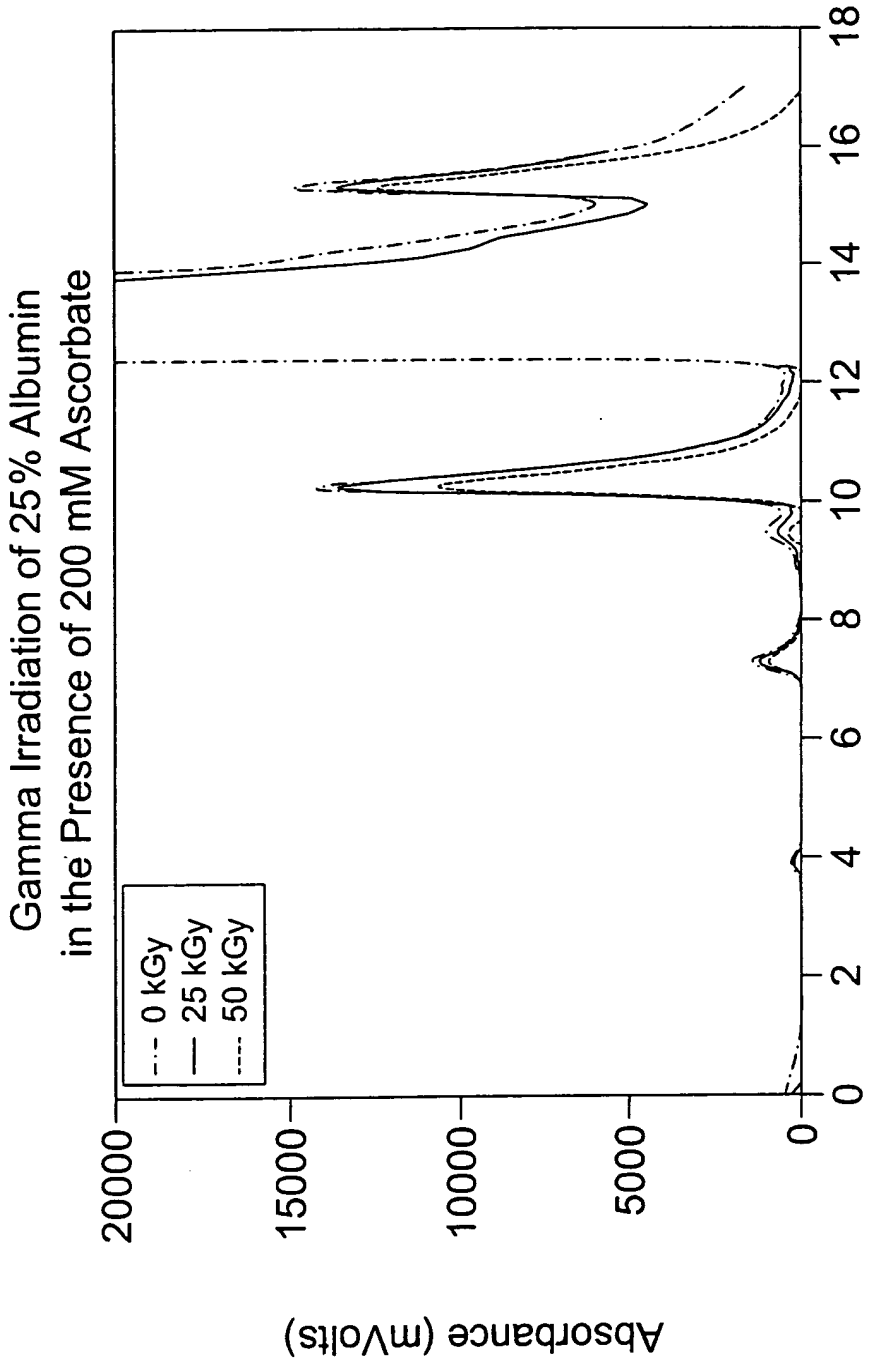


FIG. 33E

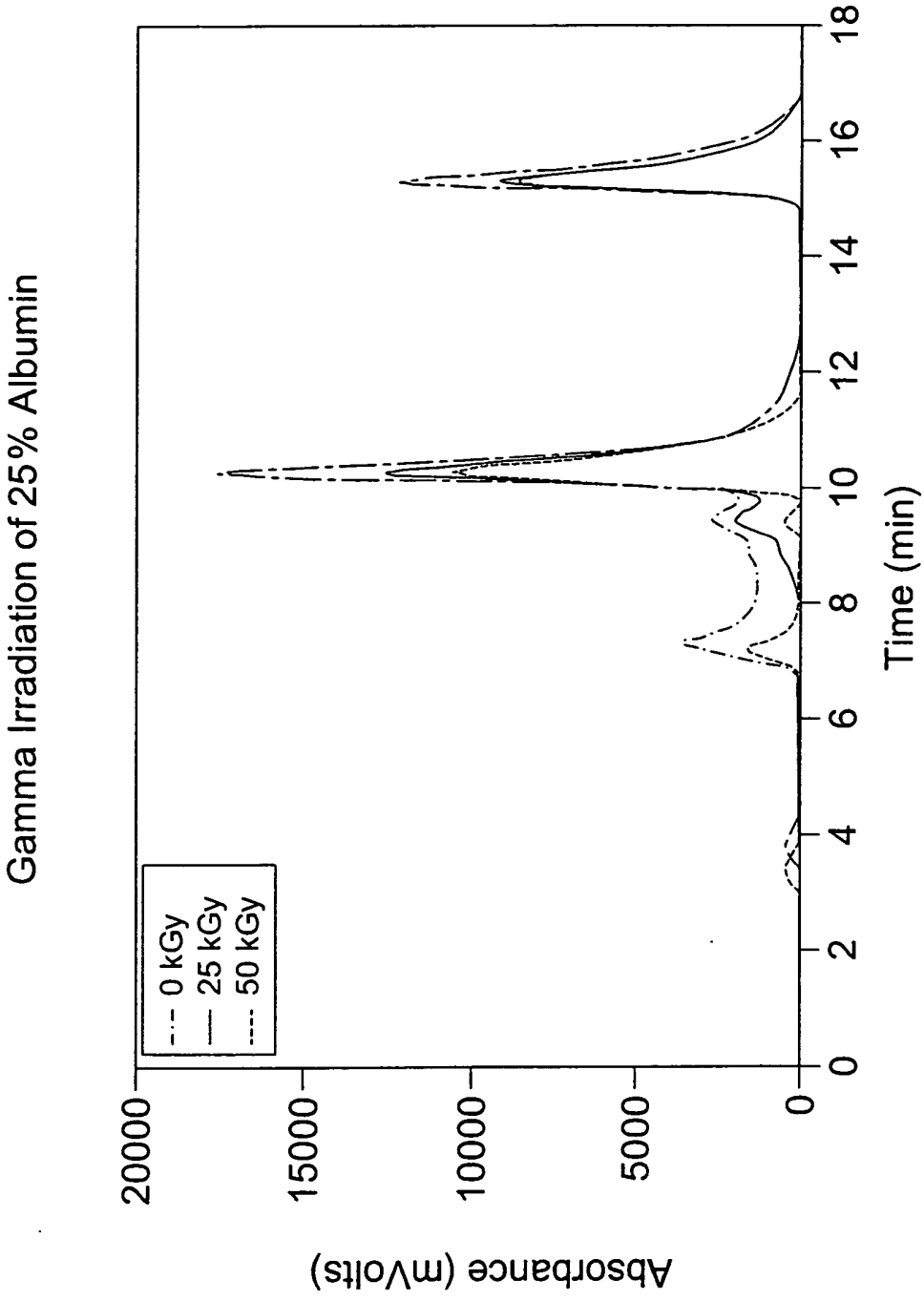


FIG. 33F

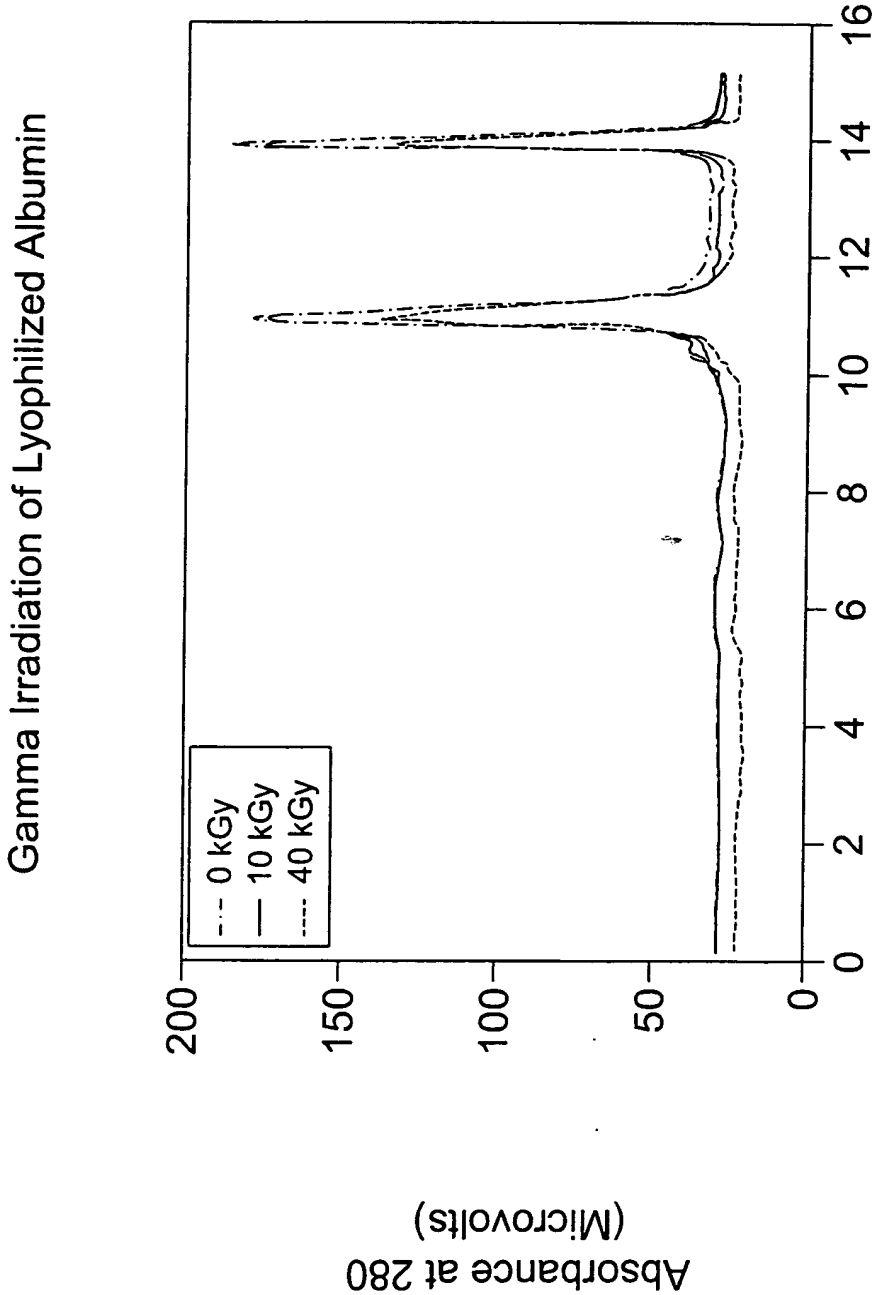


FIG. 34A

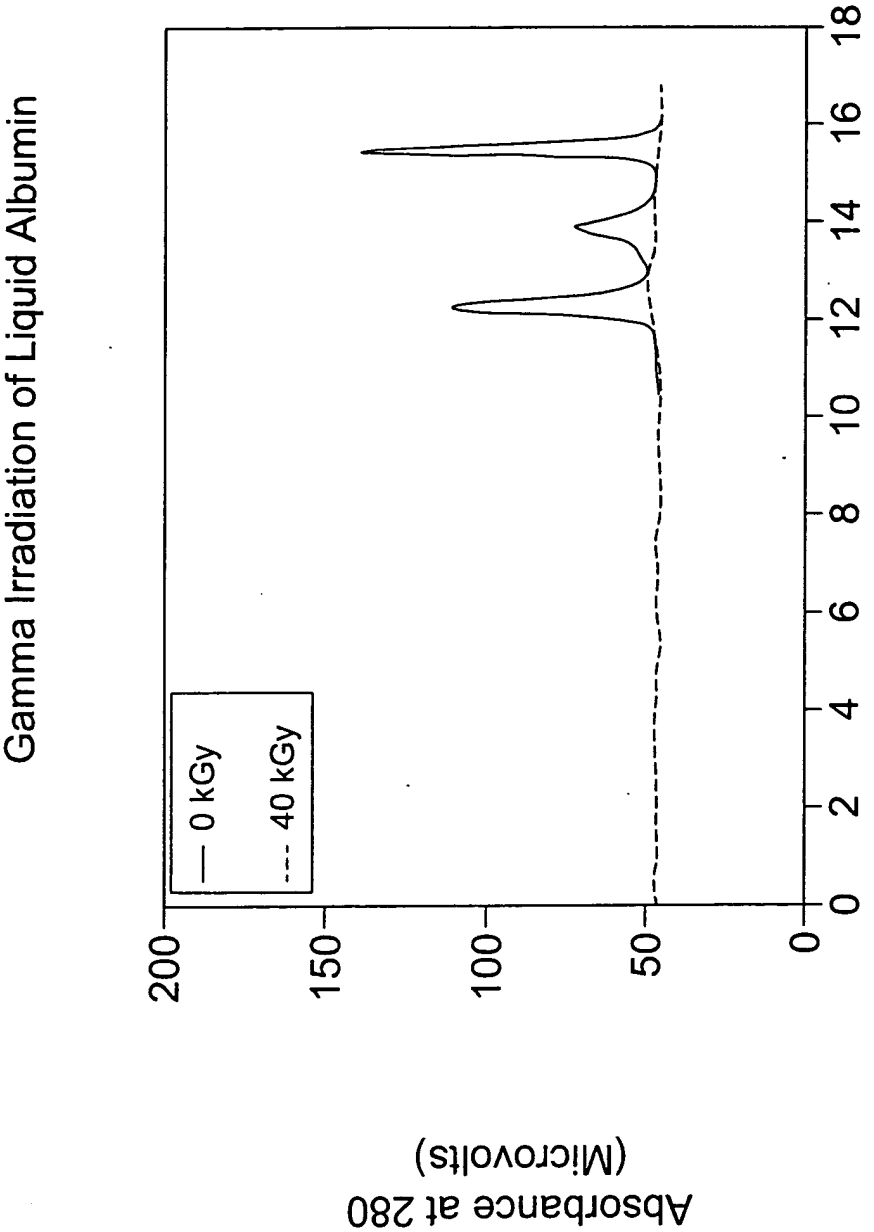
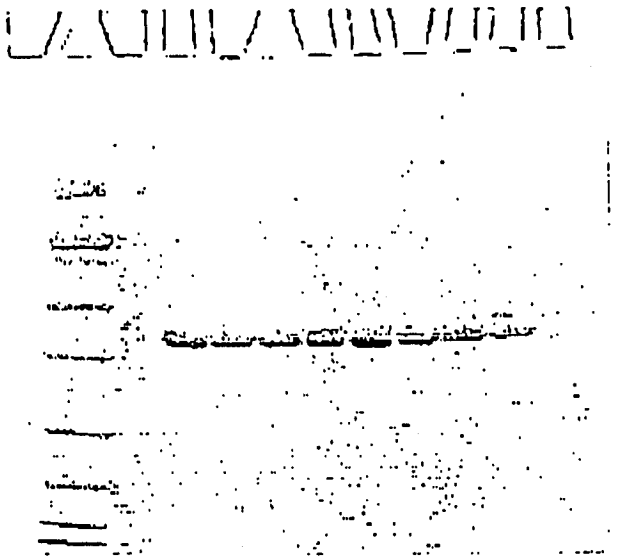


FIG. 34B

25% Albumin - Non-Reduced

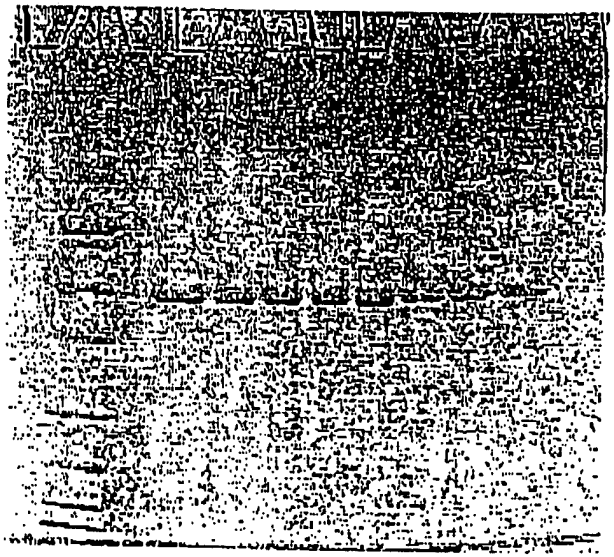


1 2 3 4 5 6 7 8 9 10 11 12

Std Kd	Lane	Sample
	1	Empty
	2	Broad Range Std. (BioRad)
200	3	Empty
116	4	0 Kgy (Control) Box 3C (+ Ar)
97	5	18.0 Kgy (≈0.91 Kgy/hr) Box 1 (+ Ar)
66	6	23.0 Kgy (≈0.92 Kgy/hr) Box 2 (+ Ar)
45	7	30.4 Kgy (≈1.01 Kgy/hr) Box 3 (+ Ar)
	8	0 Kgy (Control) Box 3C (- Ar)
31	9	18.0 Kgy (≈0.91 Kgy/hr) Box 1 (- Ar)
21.5	10	23.0 Kgy (≈0.92 Kgy/hr) Box 2 (- Ar)
14.4	11	30.4 Kgy (≈1.01 Kgy/hr) Box 3 (- Ar)
	12	Empty

FIG. 35A

25% Albumin - Reduced



1 2 3 4 5 6 7 8 9 10 11 12

Std Kd	Lane	Sample
	1	Empty
	2	Broad Range Std. (BioRad)
200	3	Empty
116	4	0 Kgy (Control) Box 3C (+ Ar)
97	5	18.0 Kgy (≈0.91 Kgy/hr) Box 1 (+ Ar)
66	6	23.0 Kgy (≈ 0.92 Kgy/hr) Box 2 (+ Ar)
45	7	30.4 Kgy (≈1.01 Kgy/hr) Box 3 (+ Ar)
	8	0 Kgy (Control) Box 3C (- Ar)
31	9	18.0 Kgy (≈ 0.91 Kgy/hr) Box 1 (- Ar)
21.5	10	23.0 Kgy (≈ 0.92 Kgy/hr) Box 2 (- Ar)
14.4	11	30.4 Kgy (≈1.01 Kgy/hr) Box 3 (- Ar)
	12	Empty

FIG. 35B

Gamma Irradiation of Powder PPF at -20°C
Reduced

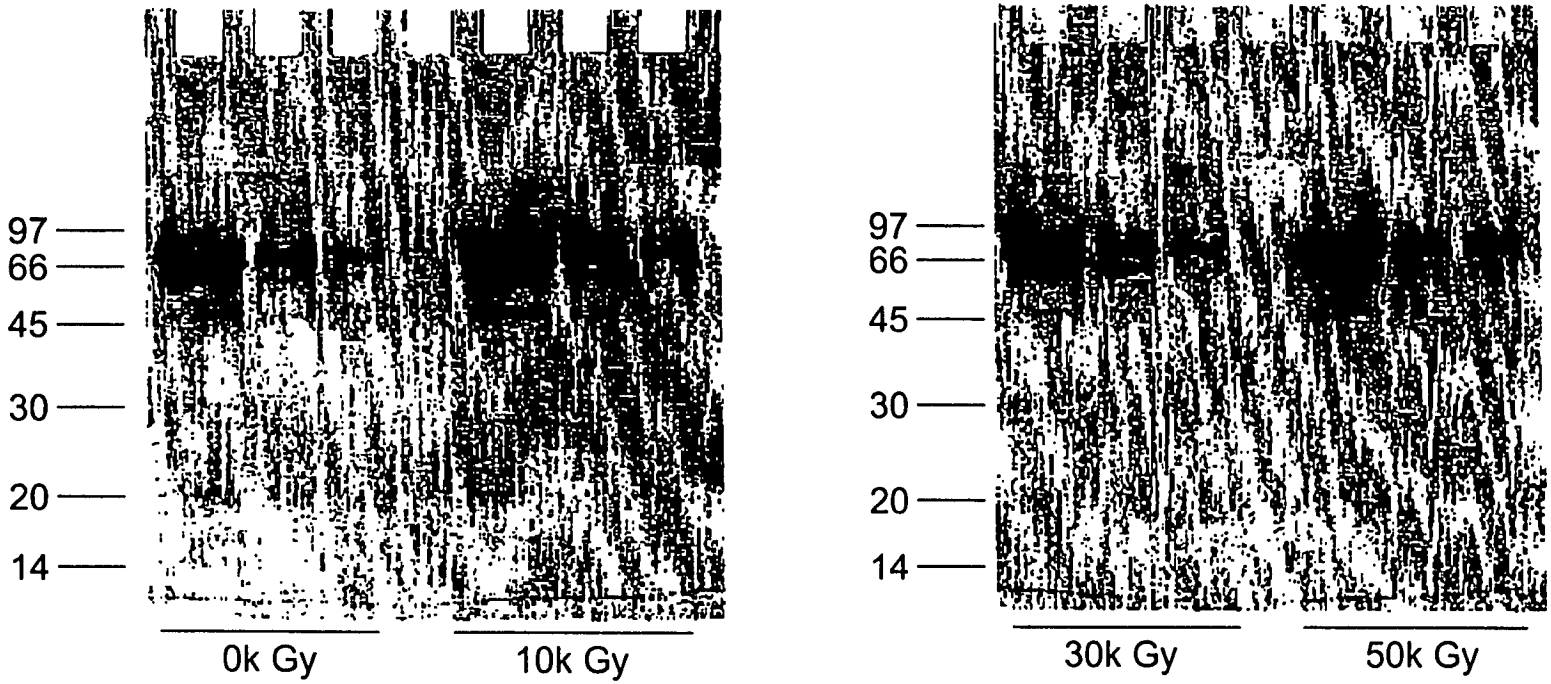


FIG. 36A

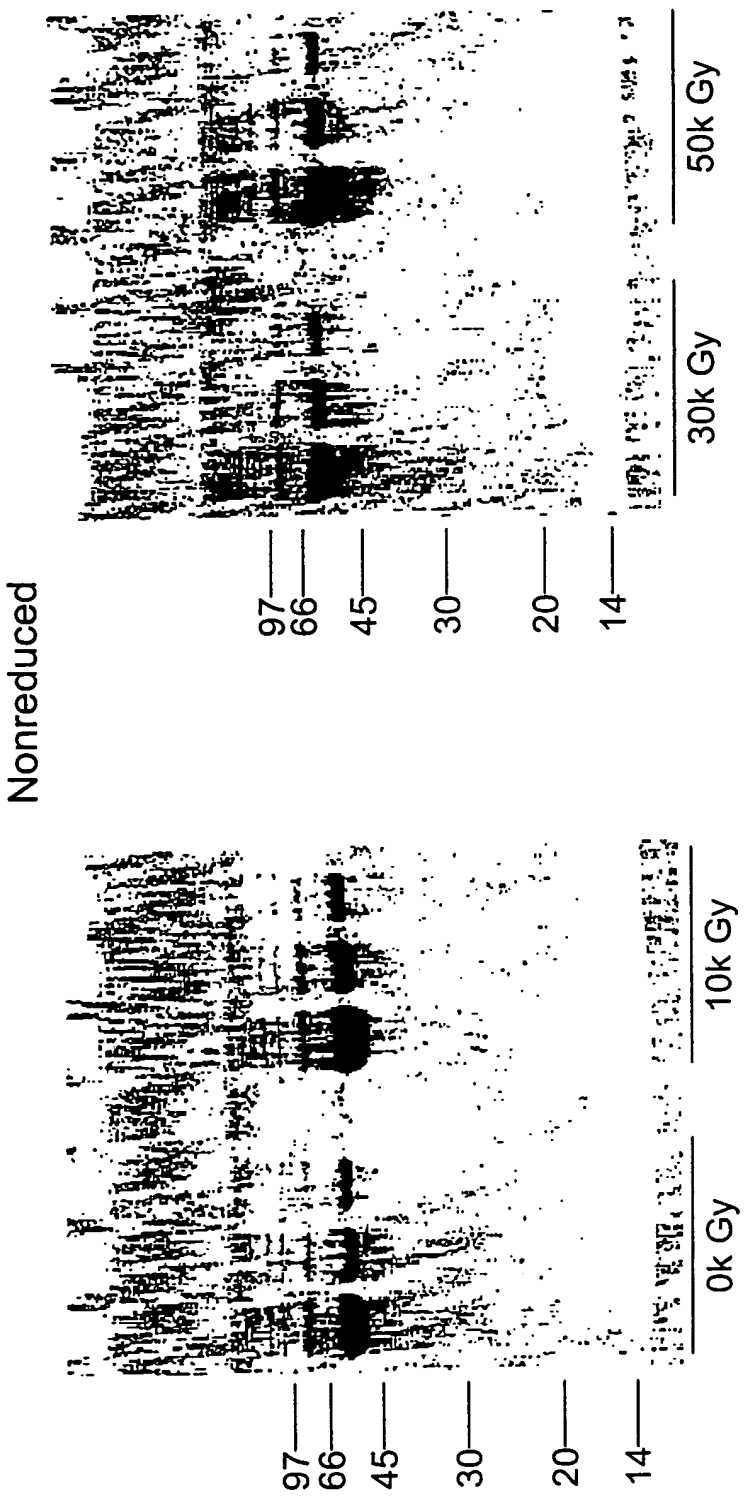


FIG. 36B

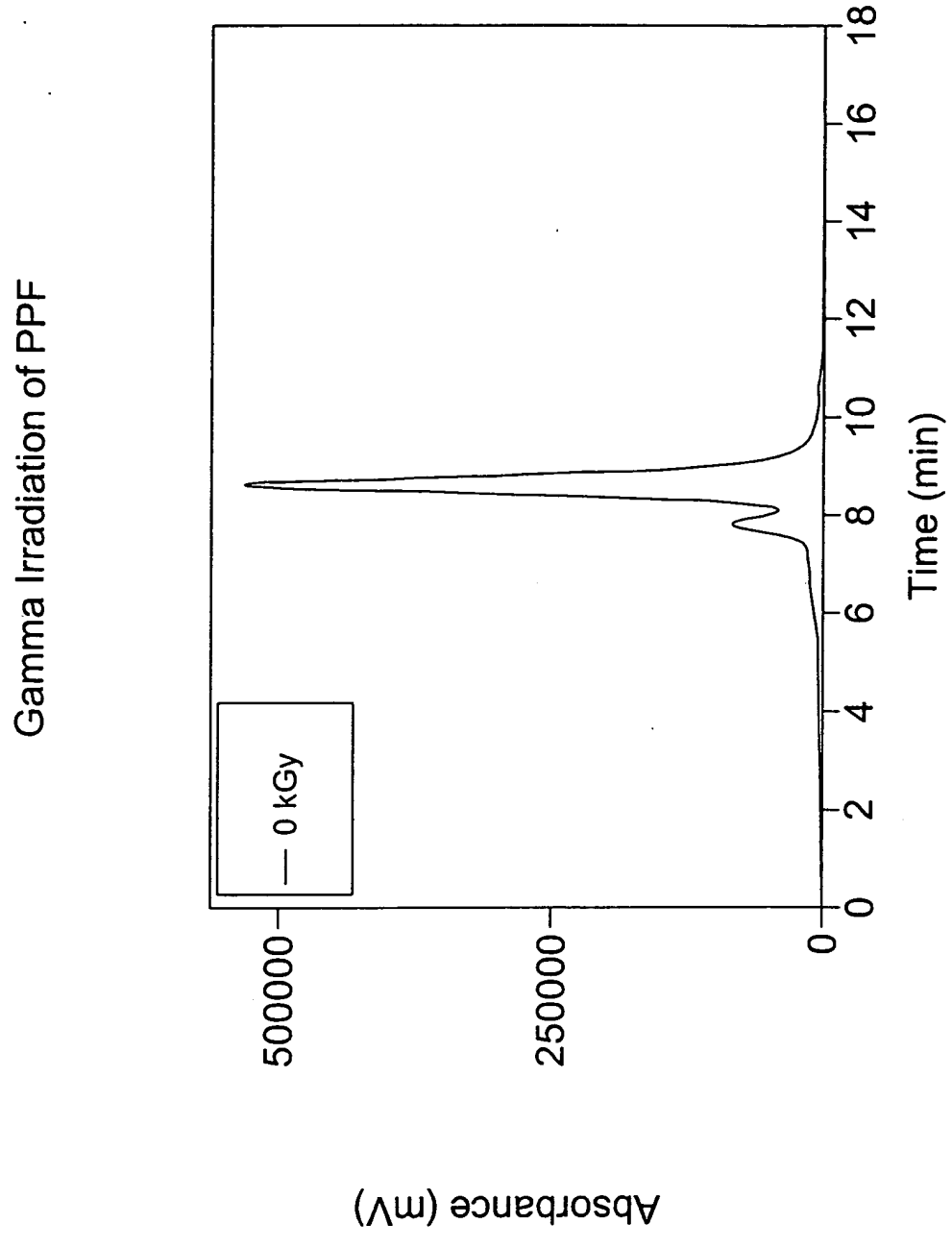


FIG. 36C

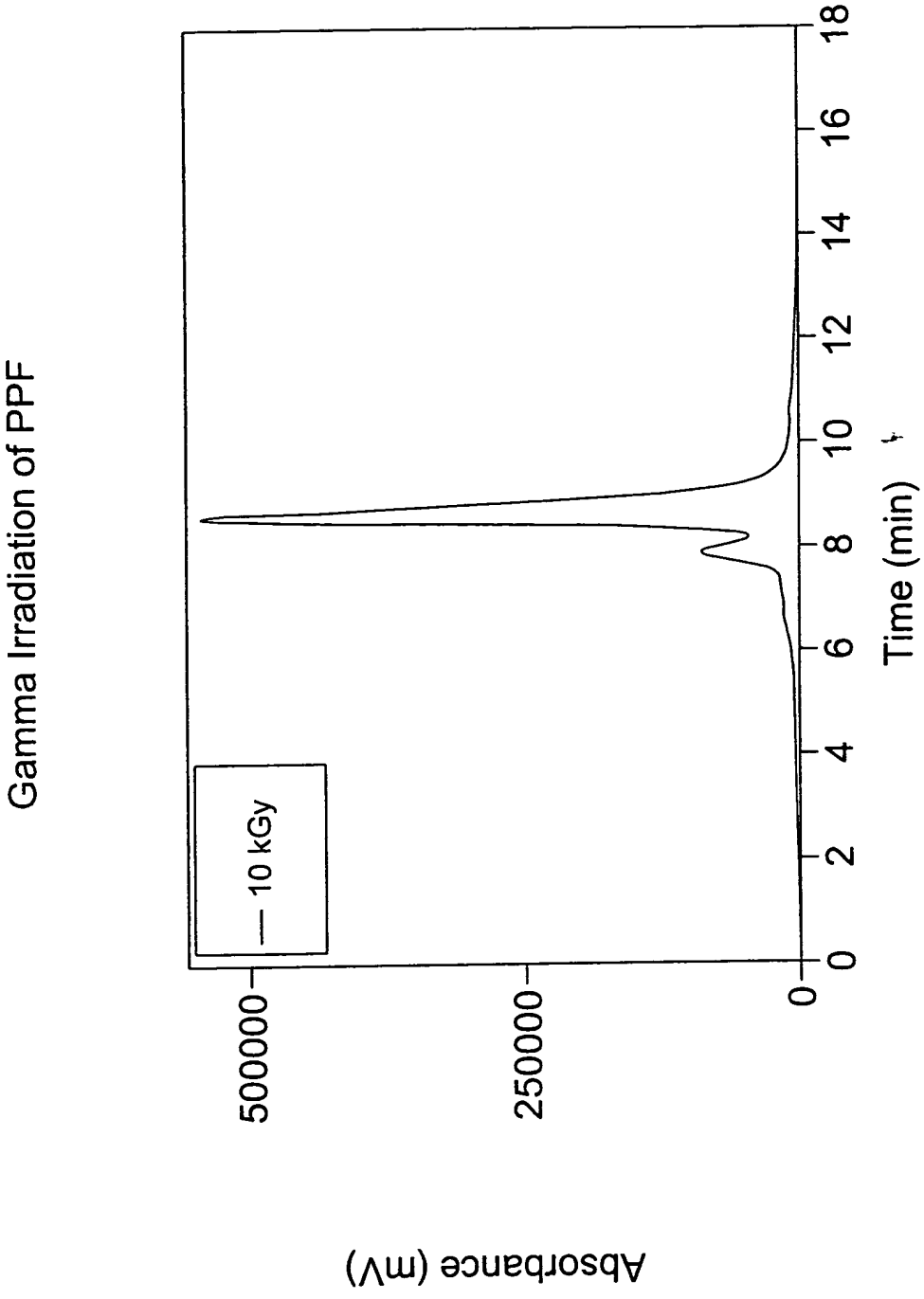


FIG. 36D

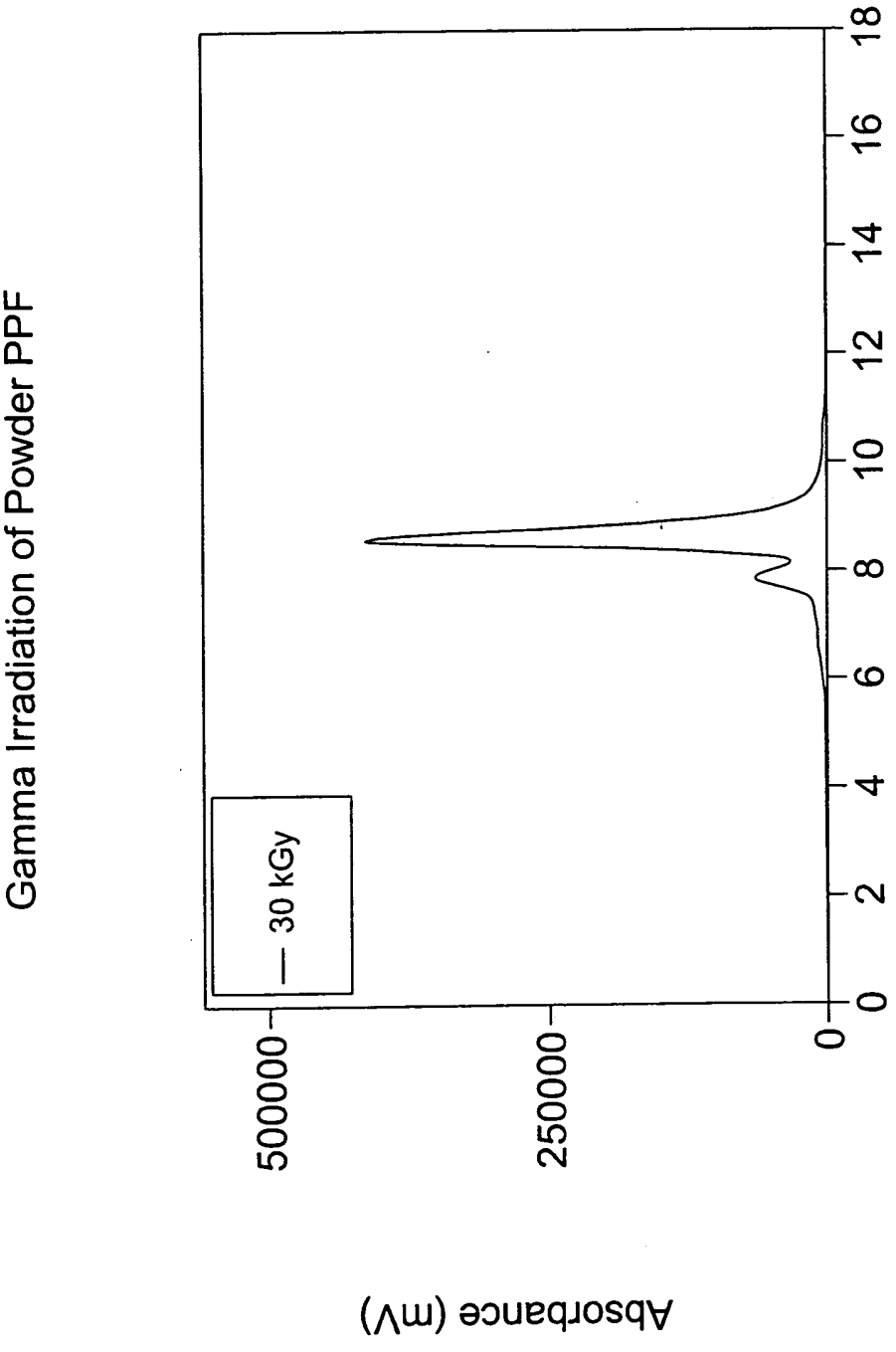


FIG. 36E

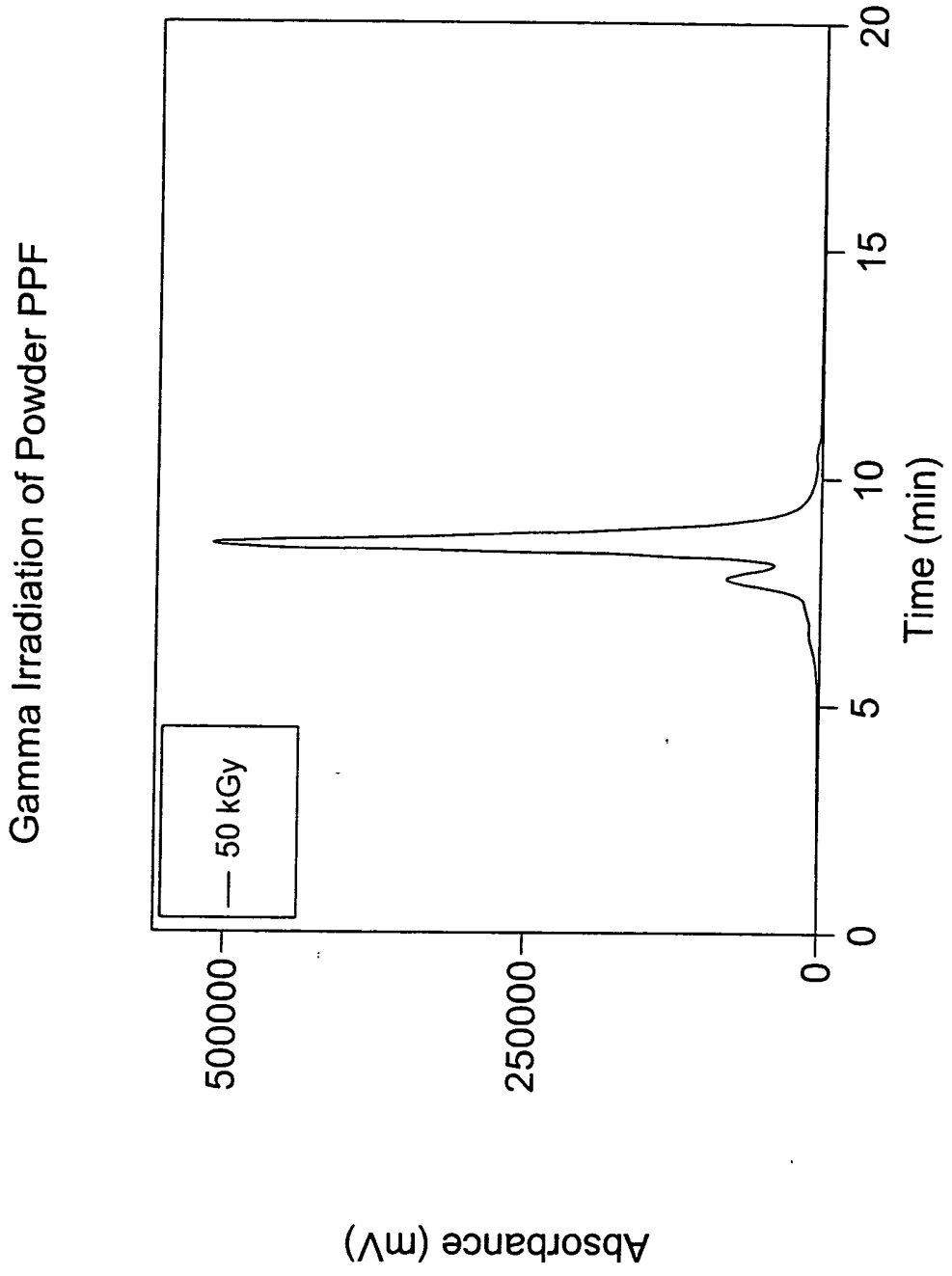


FIG. 36F

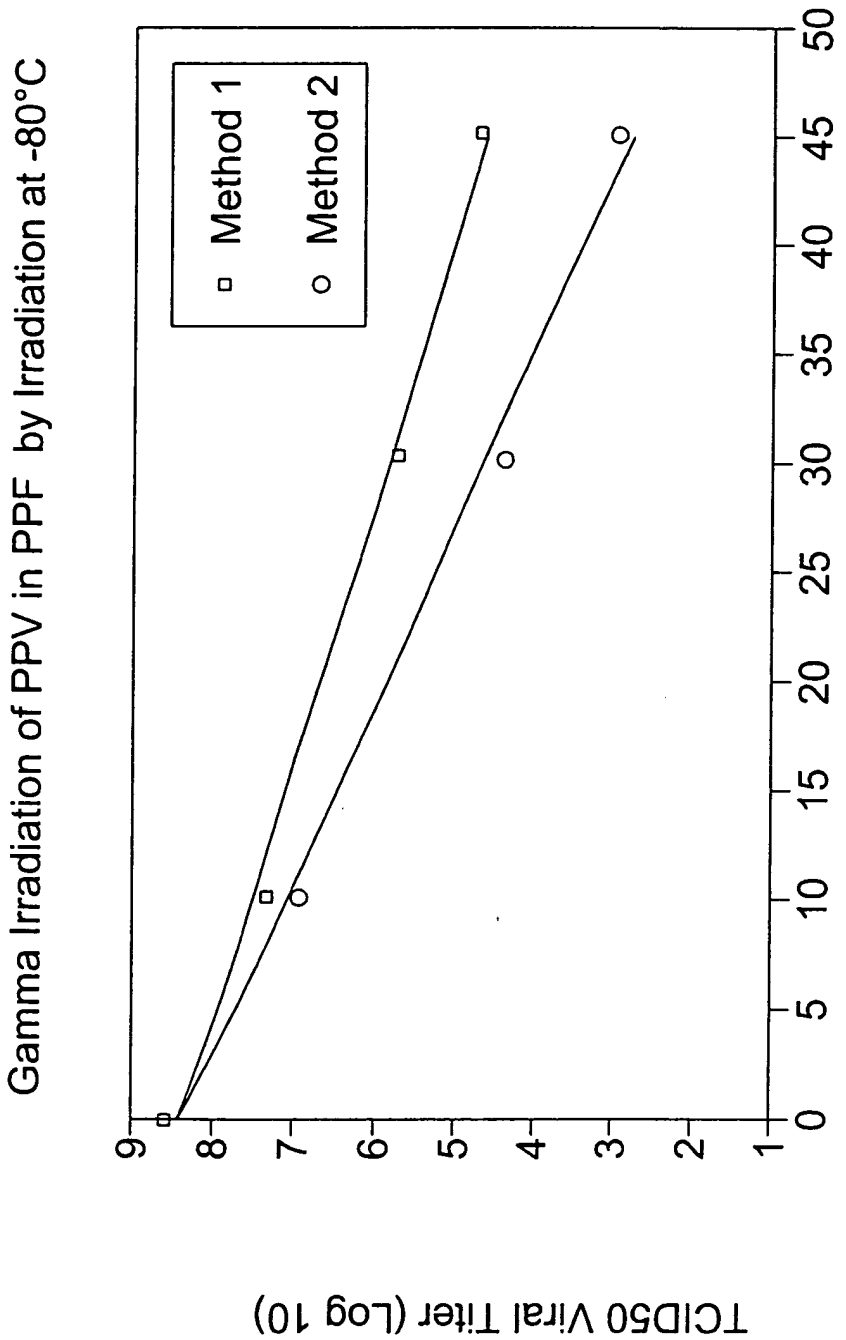
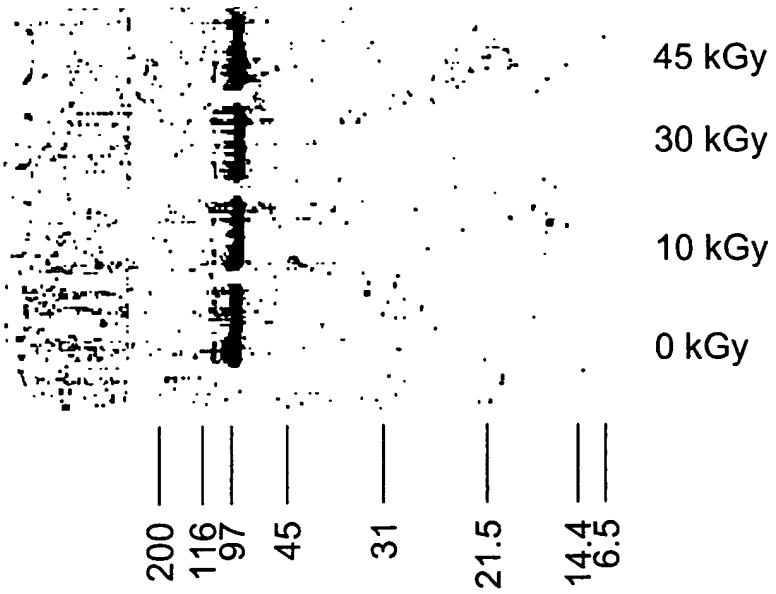


FIG. 37A

Gamma Irradiation of PPF By Method 2

Reduced, 12.5%



Nonreduced, 12.5%

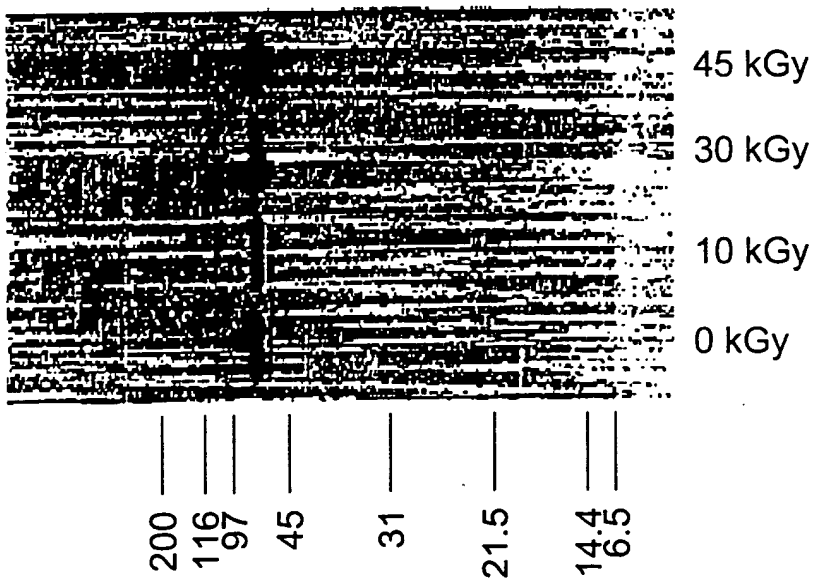


FIG. 37B

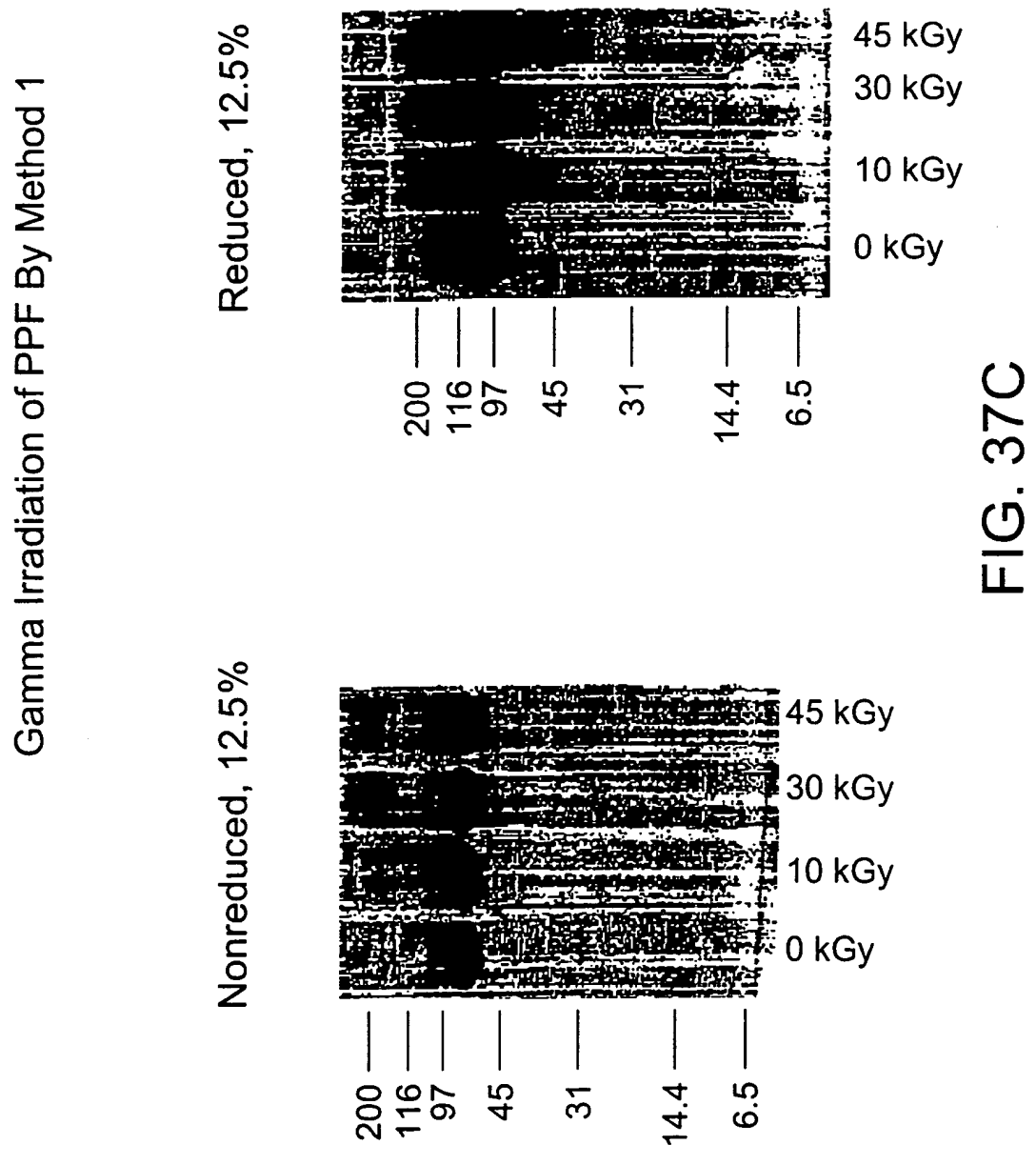


FIG. 37C

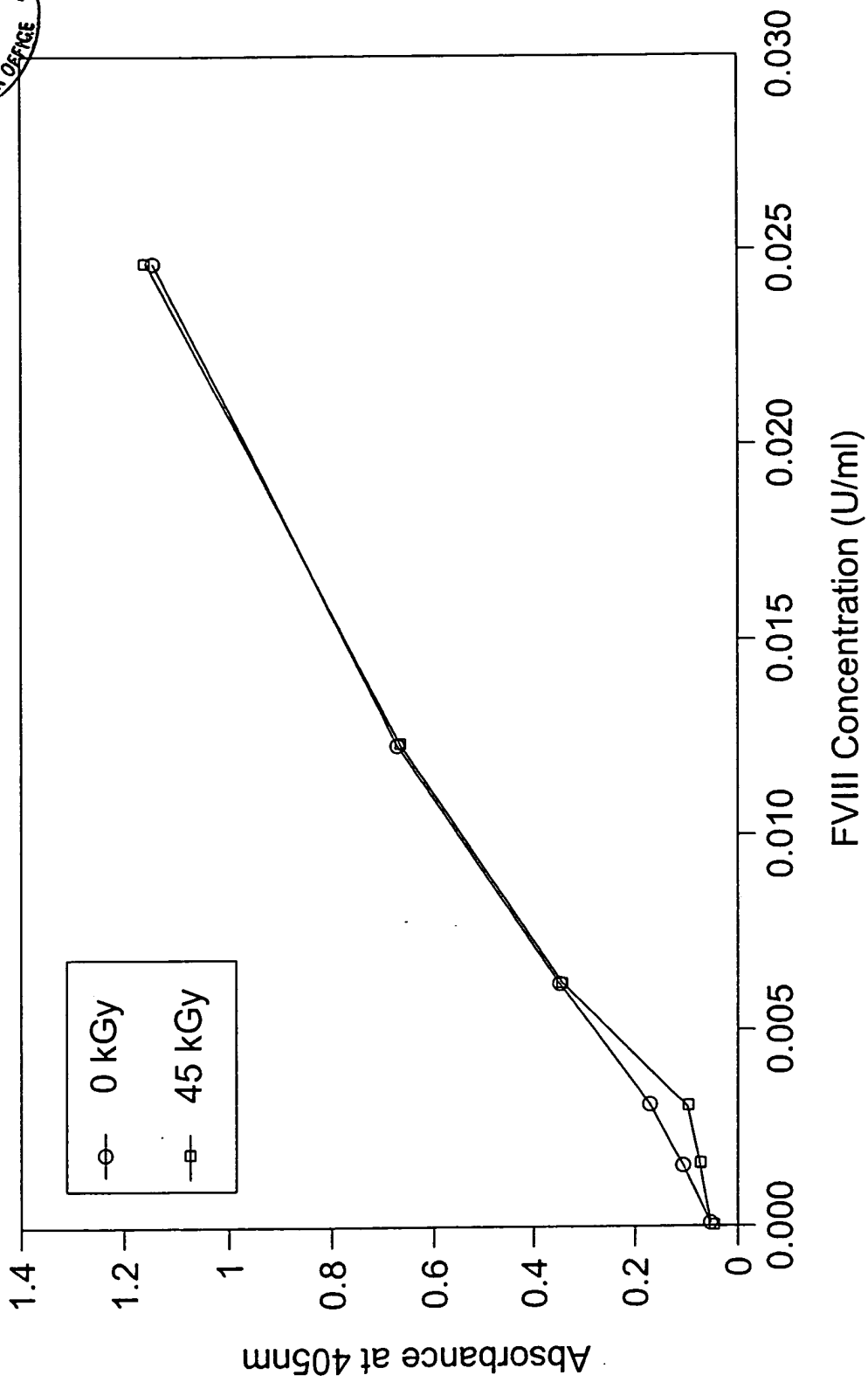


FIG. 38

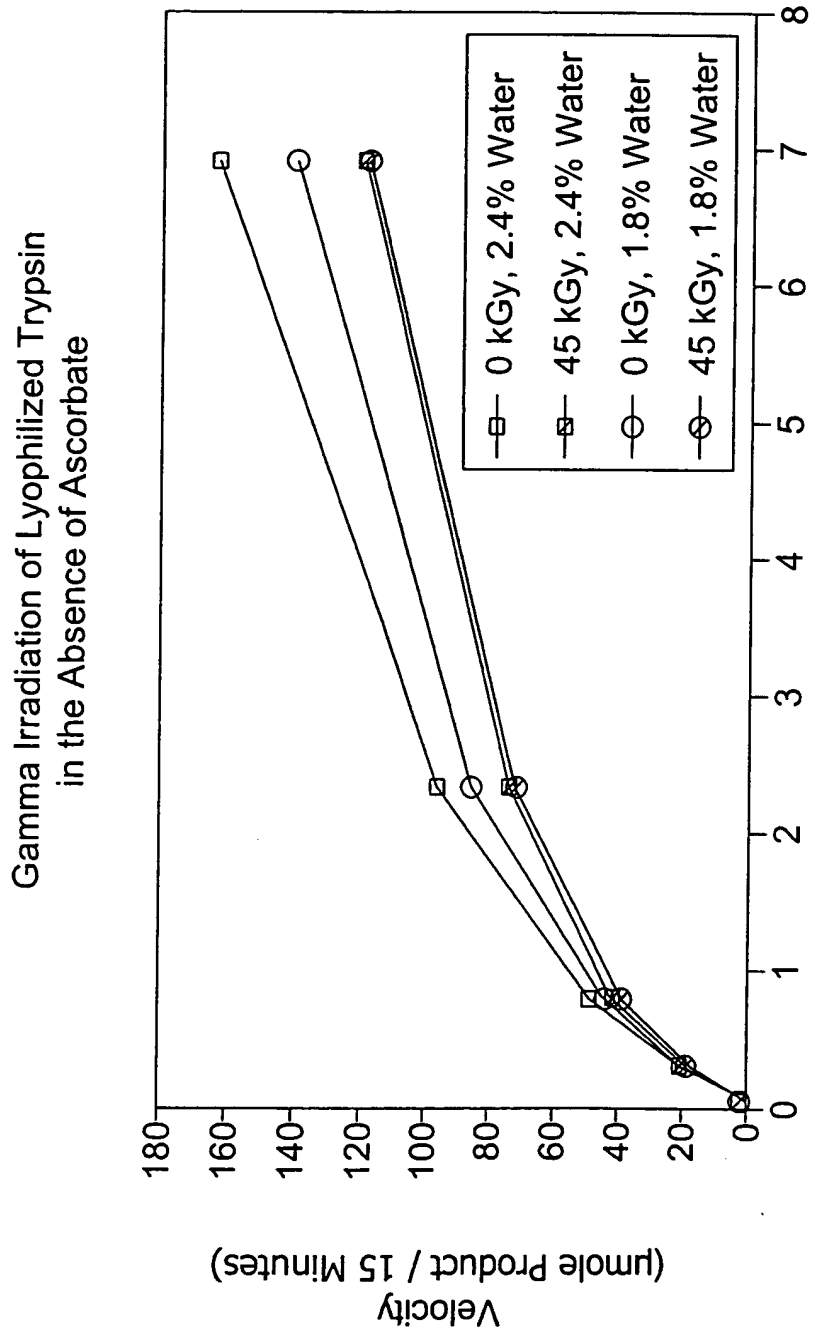


FIG. 39A

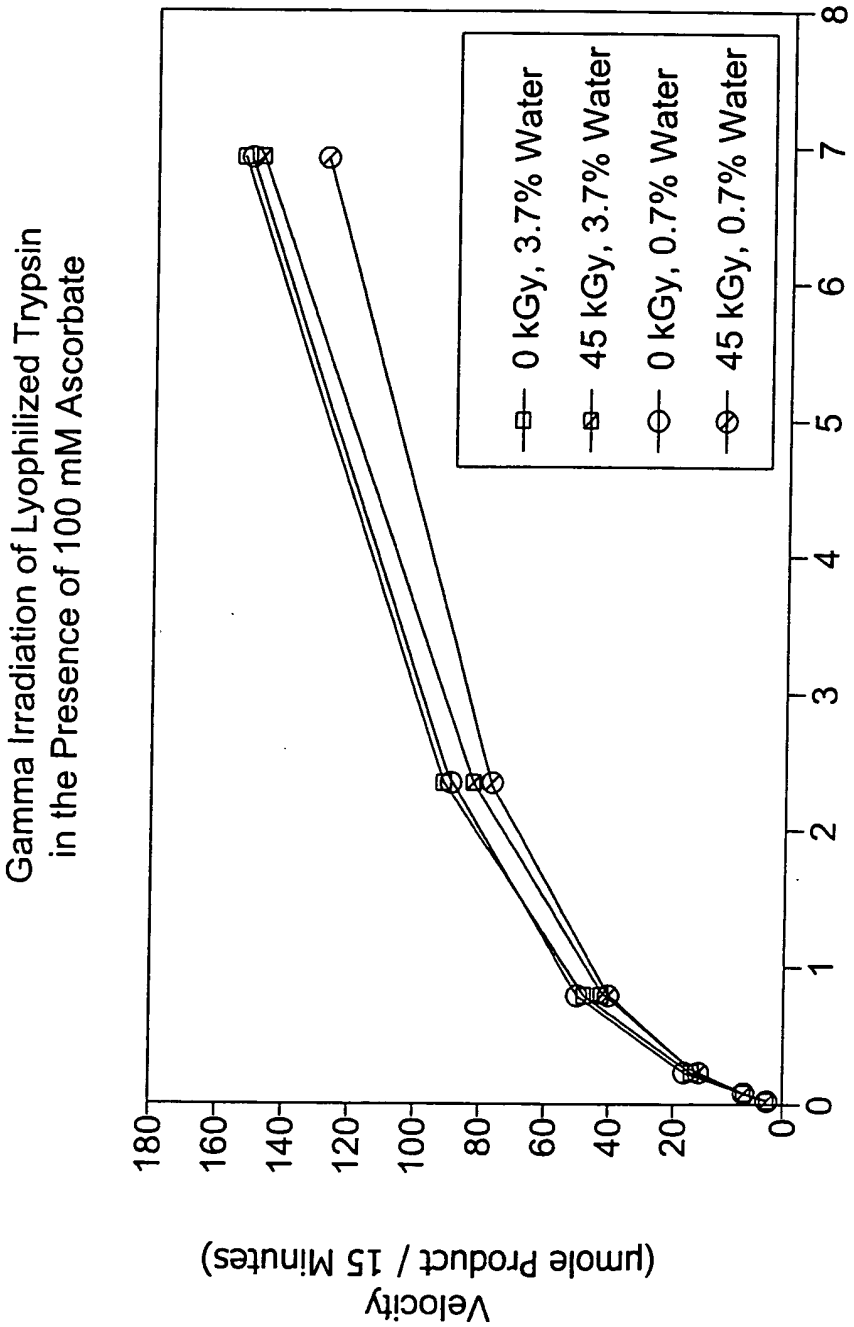


FIG. 39B

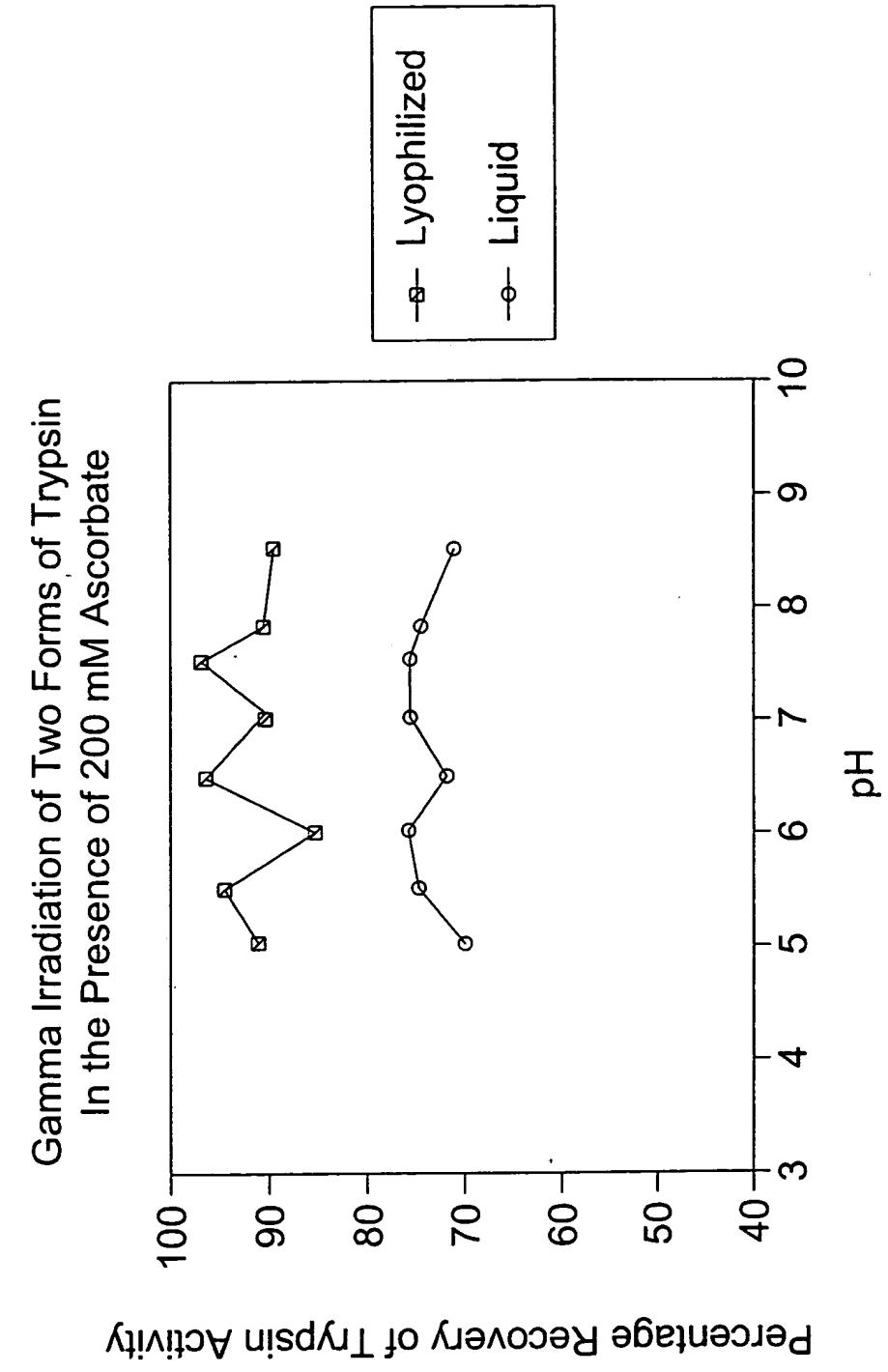


FIG. 40

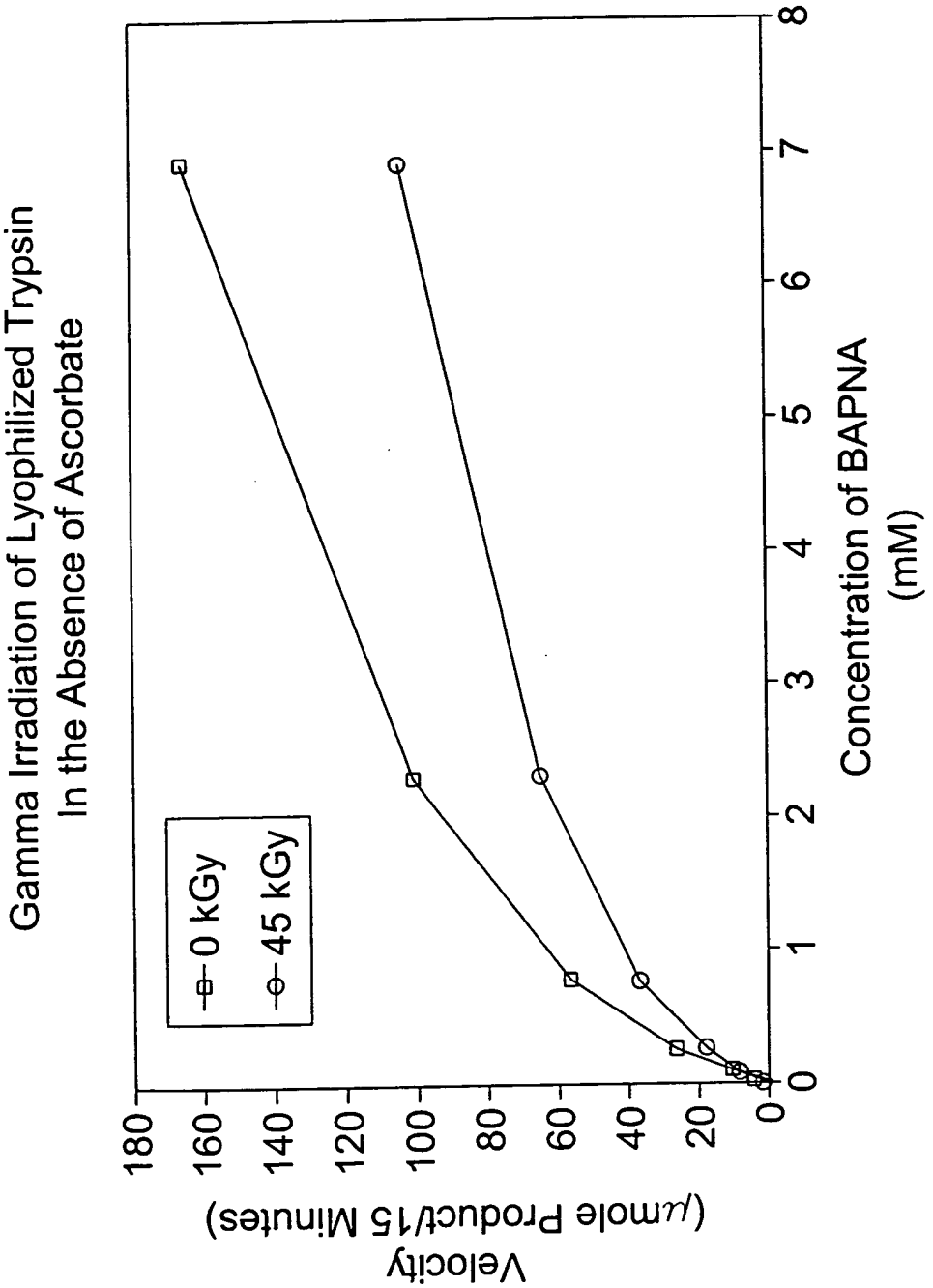


FIG. 41A

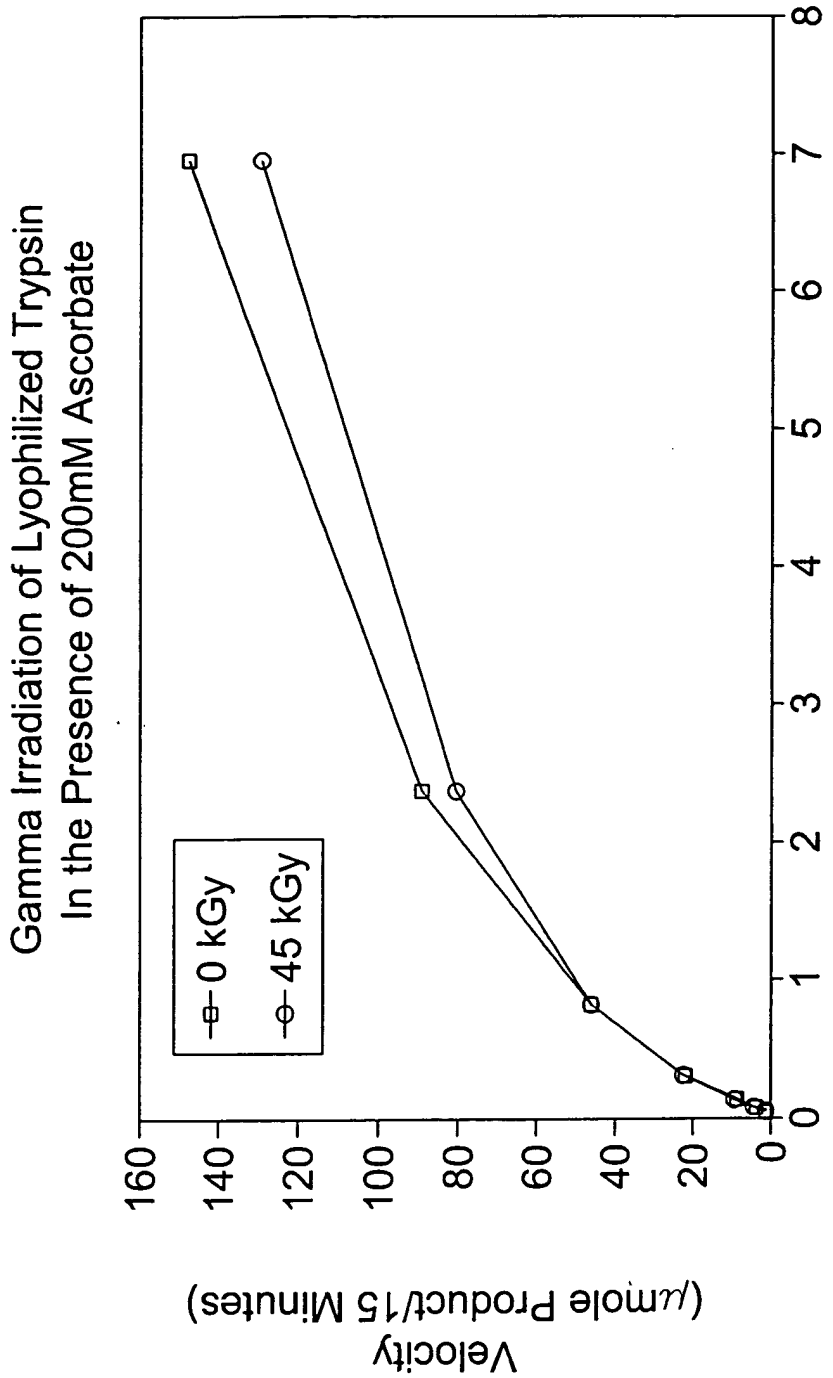


FIG. 41B

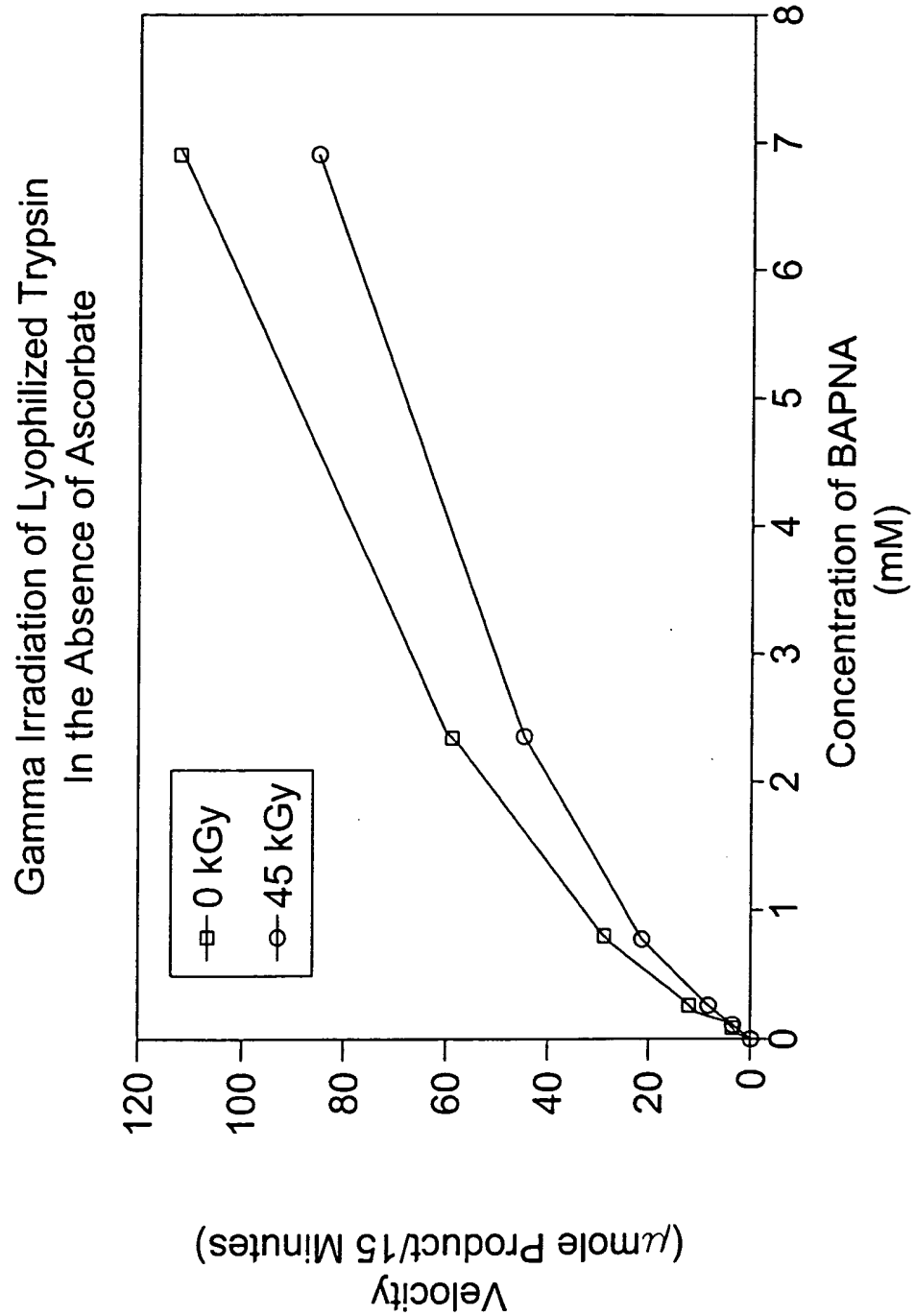


FIG. 42A

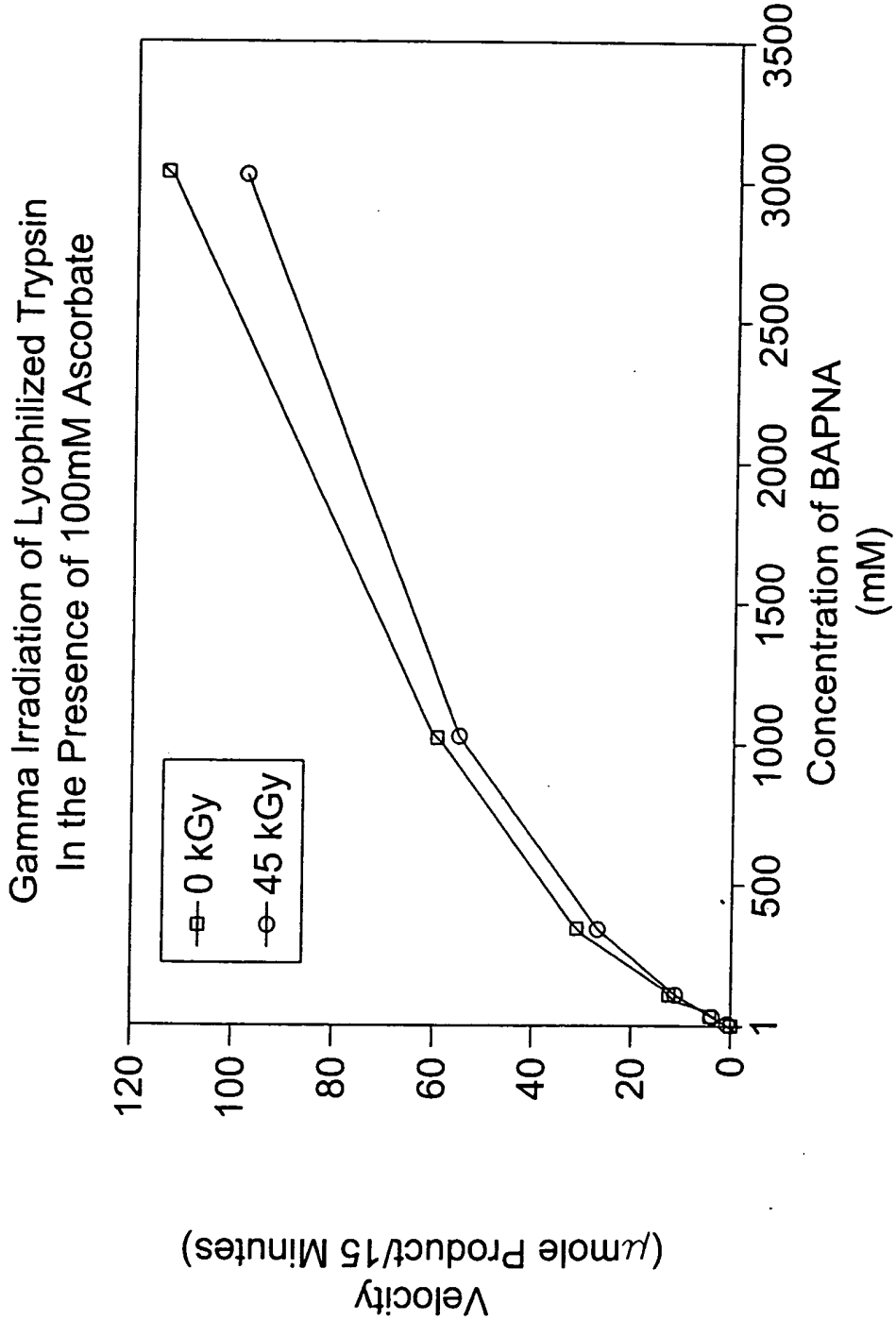


FIG. 42B

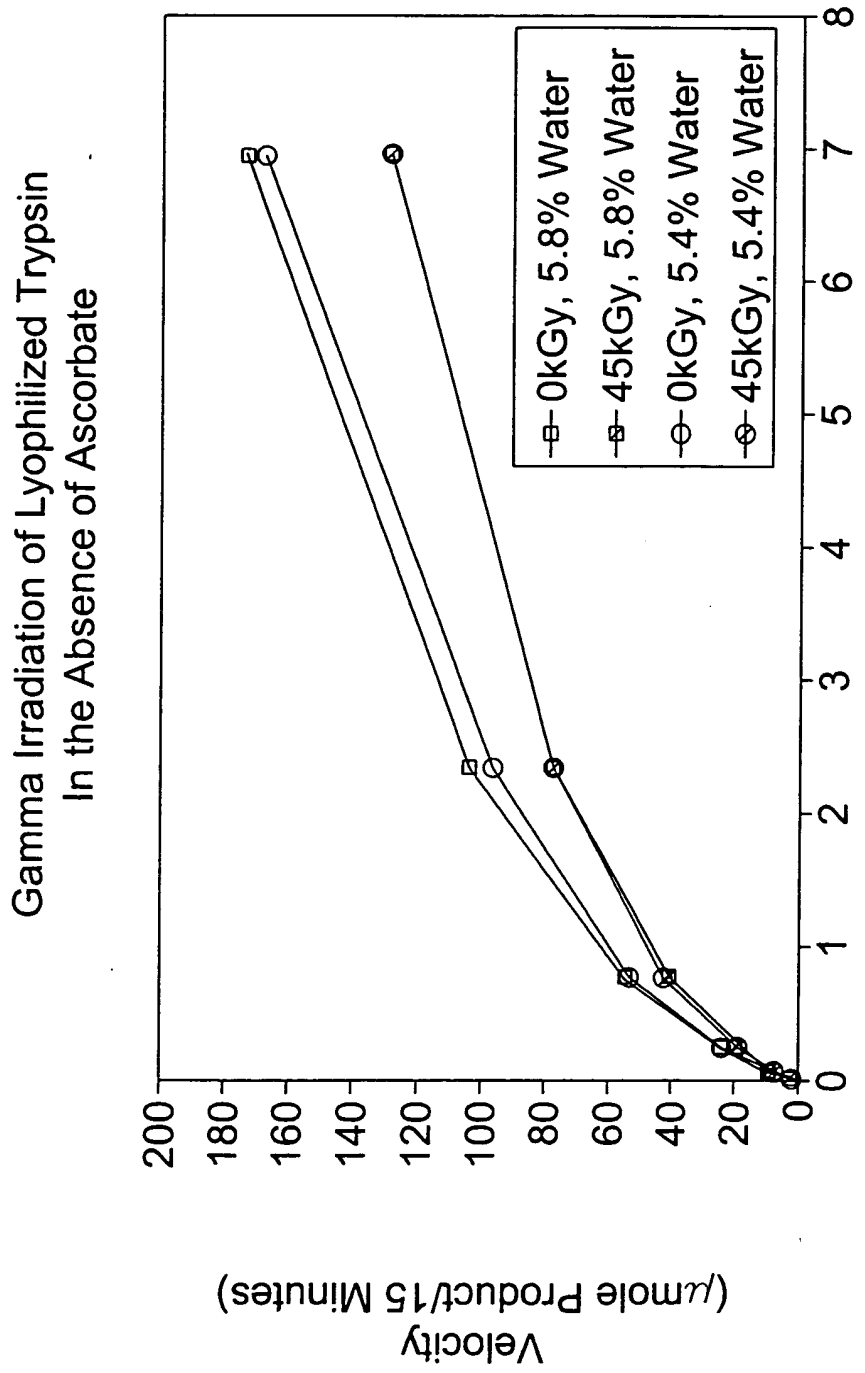


FIG. 43A

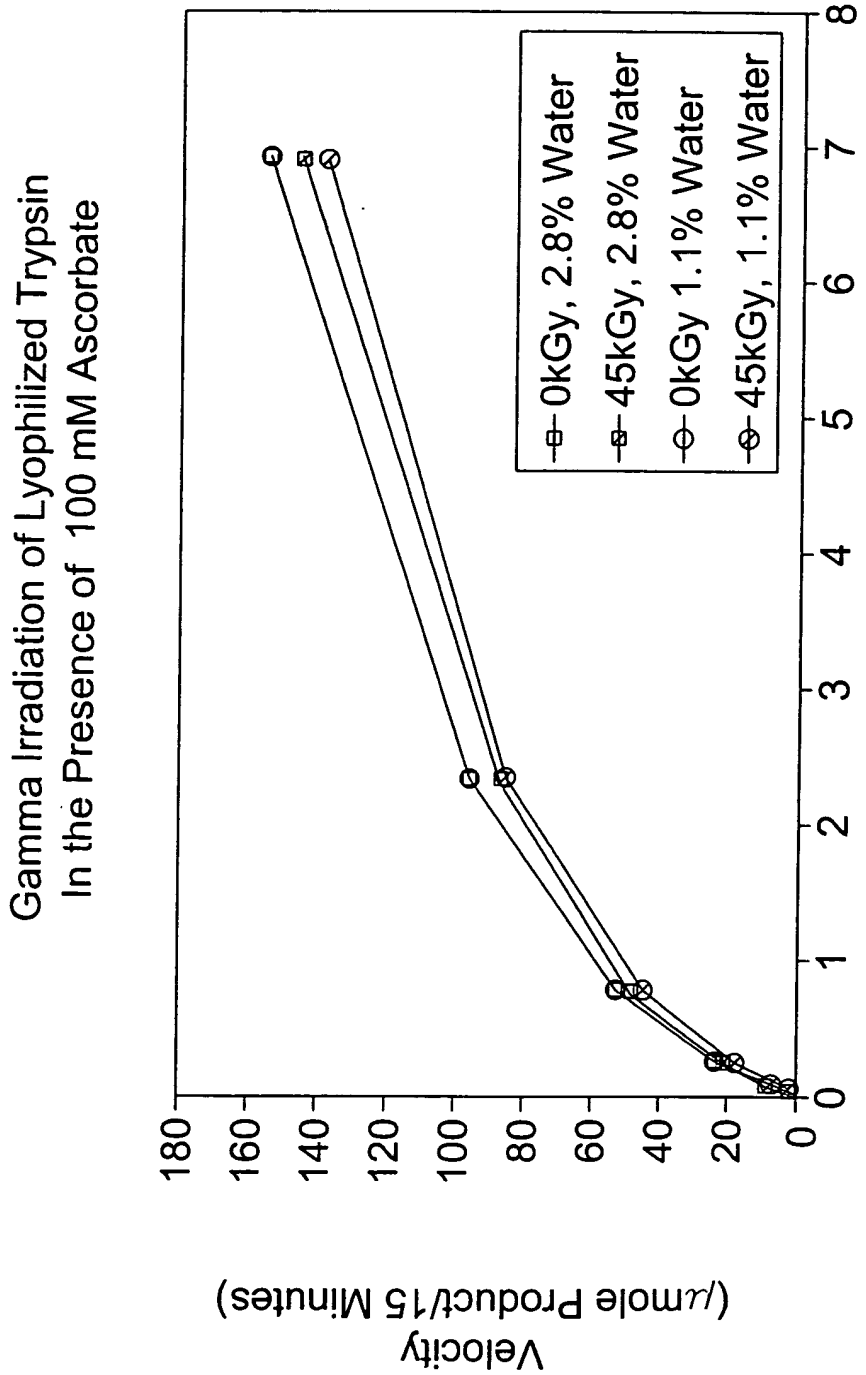


FIG. 43B

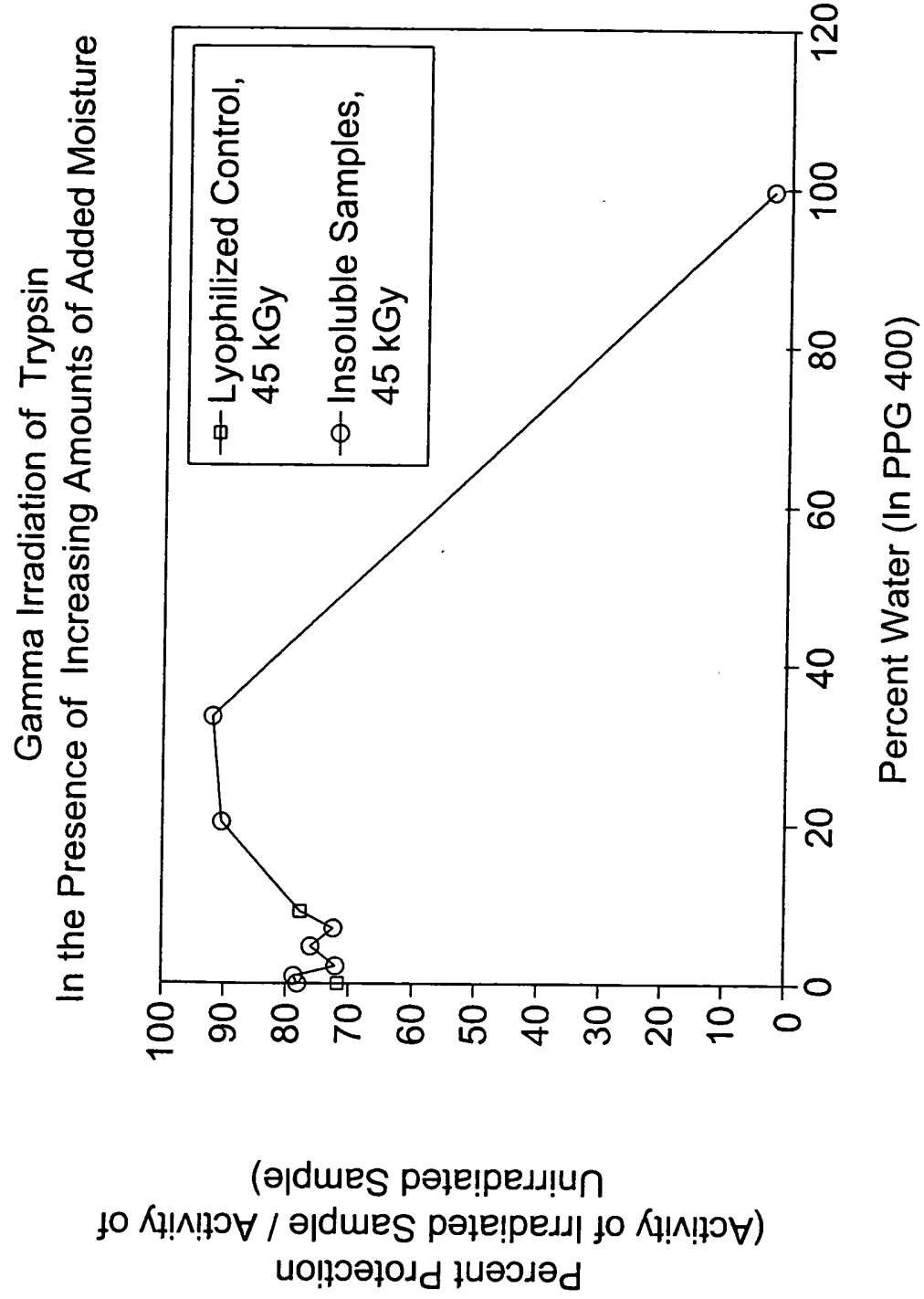


FIG. 44

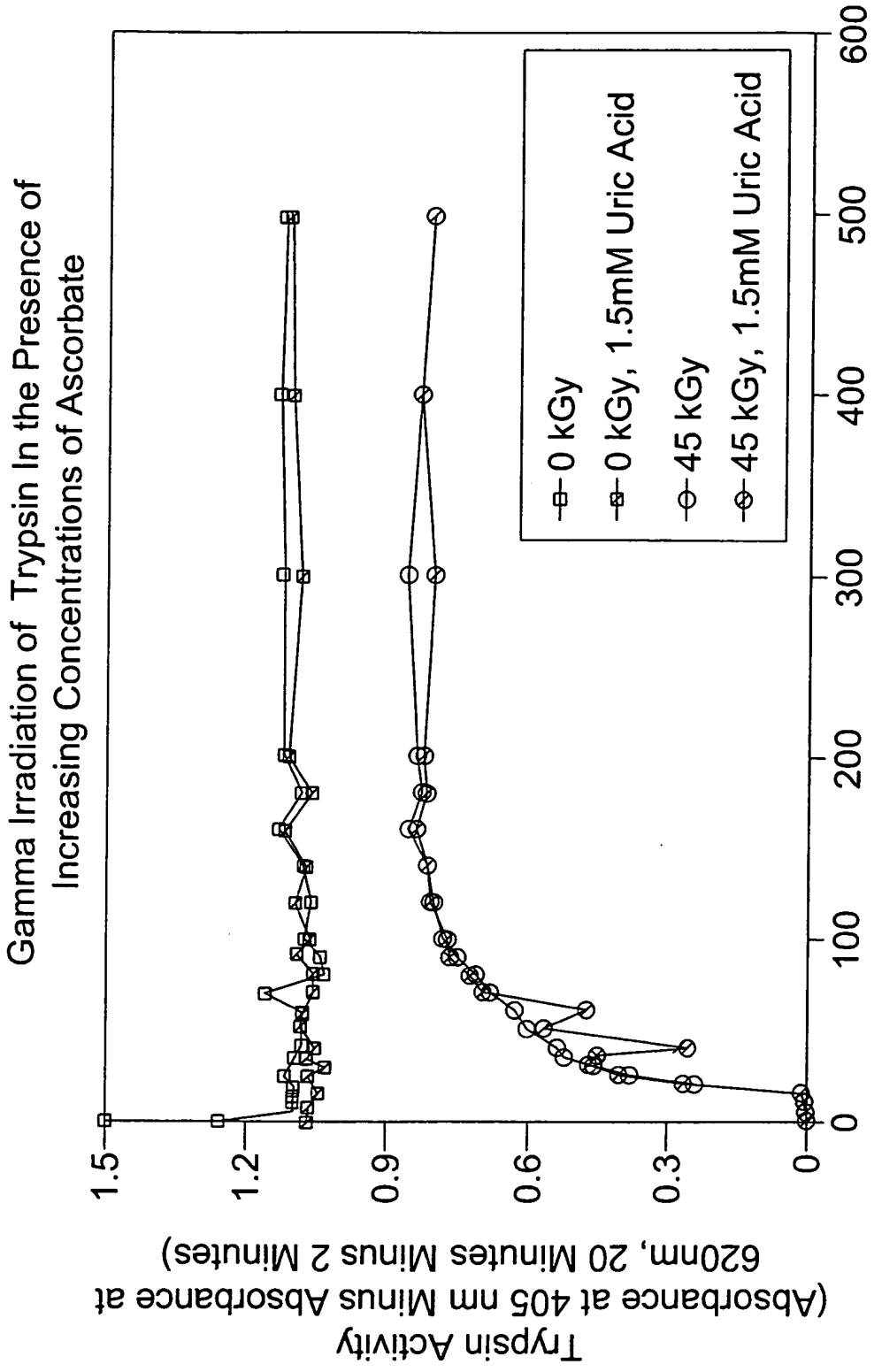


FIG. 45

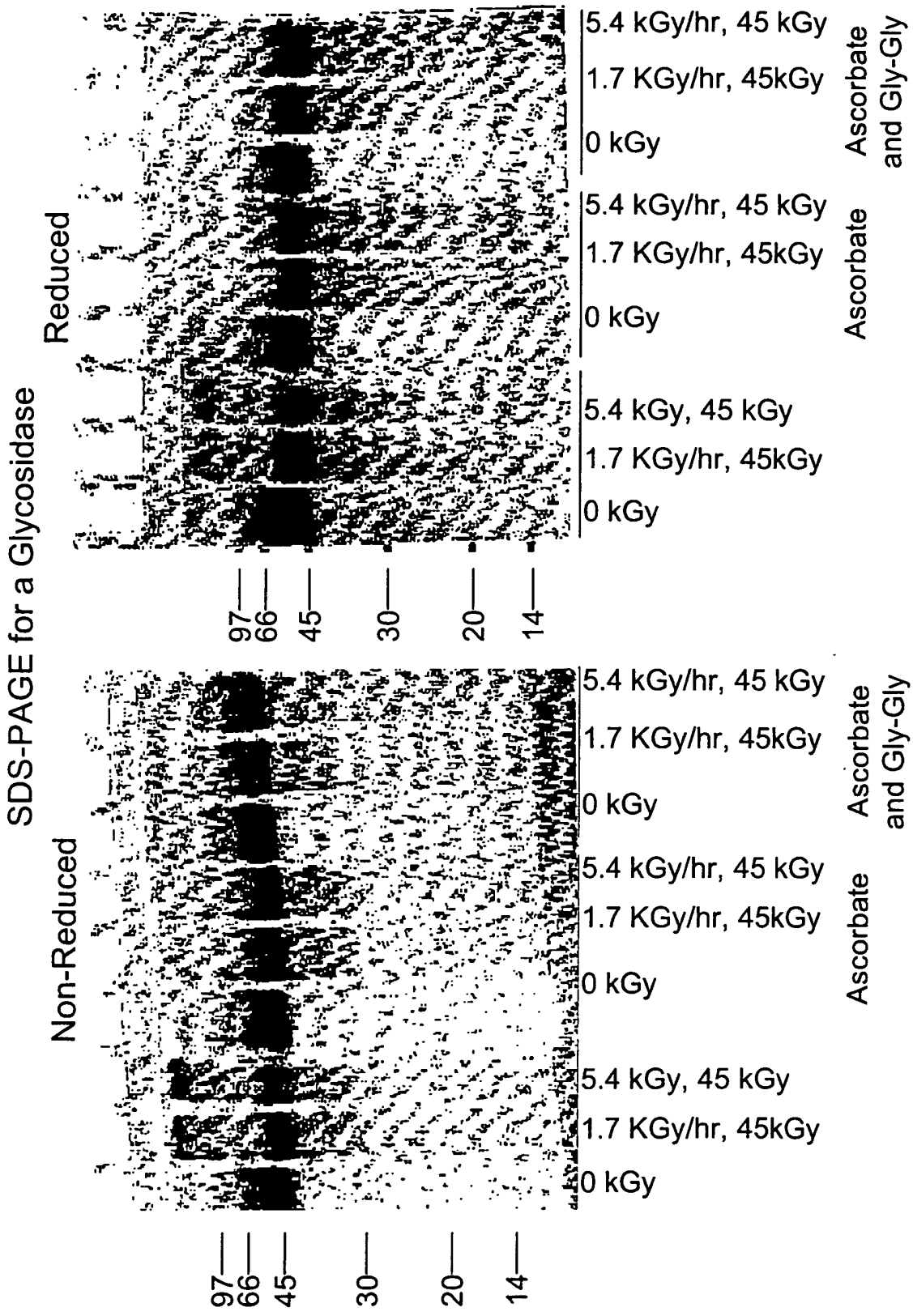


FIG. 46A

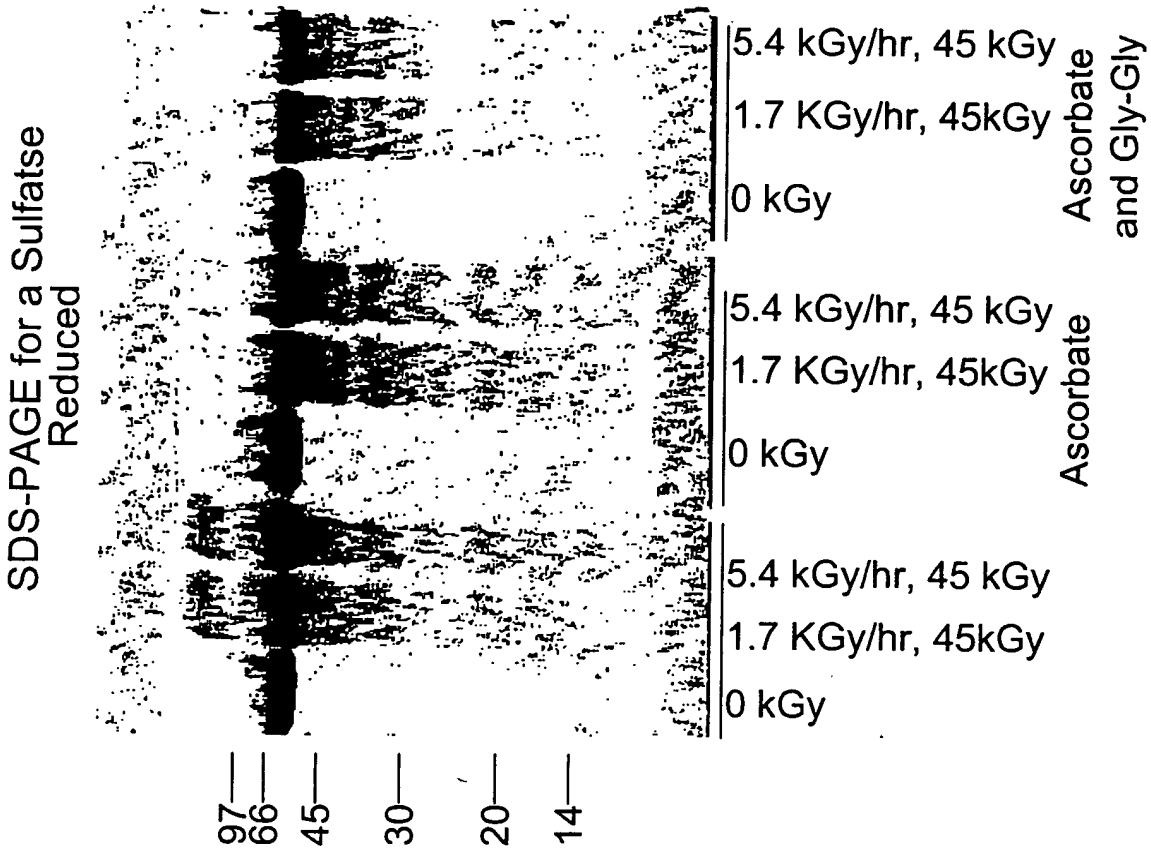


FIG. 46B

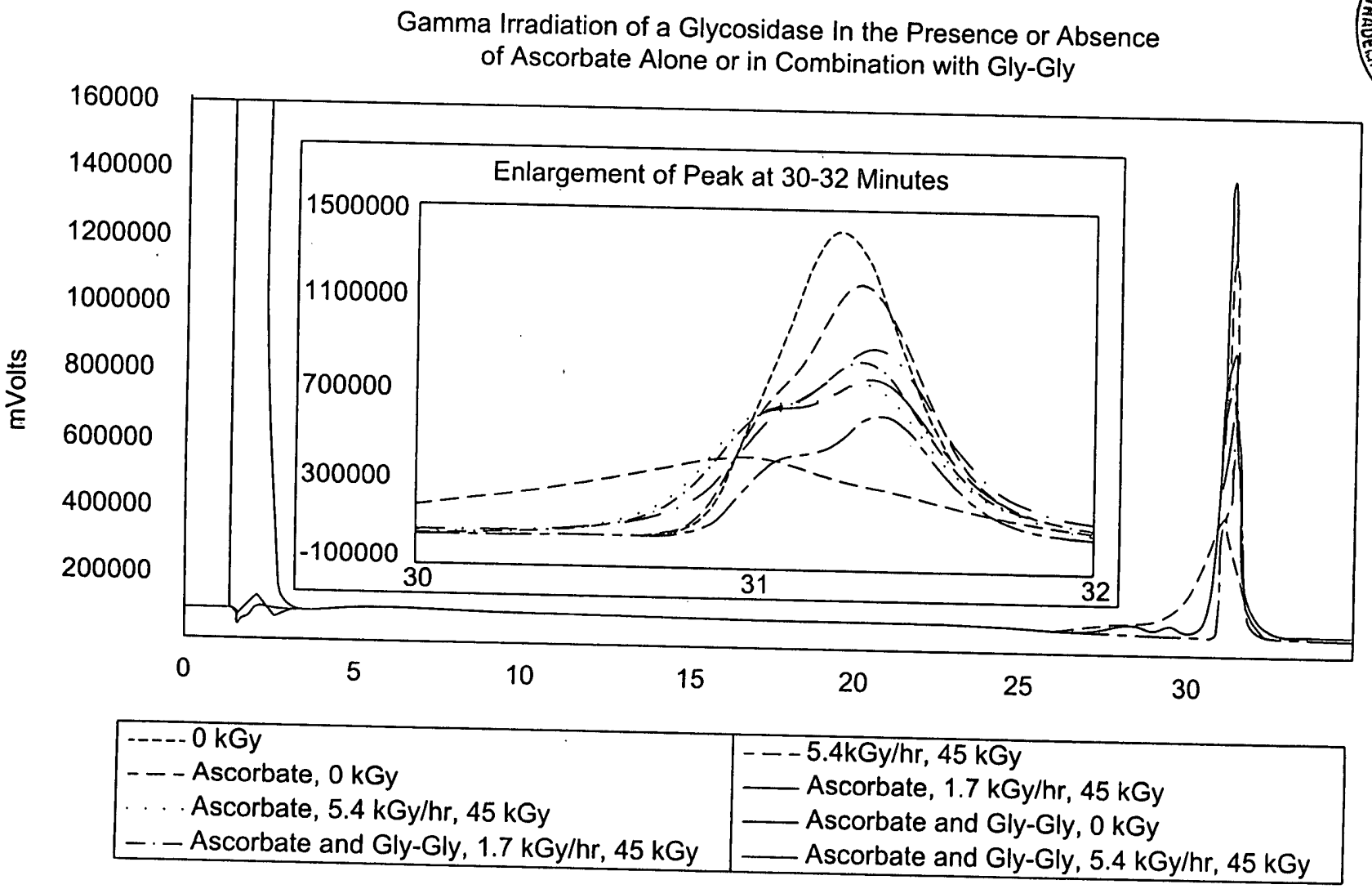


FIG. 47

Gamma Irradiation of a Lyophilized Glycosidase and Sulfatase In the Absence and Presence of 100mM Ascorbate

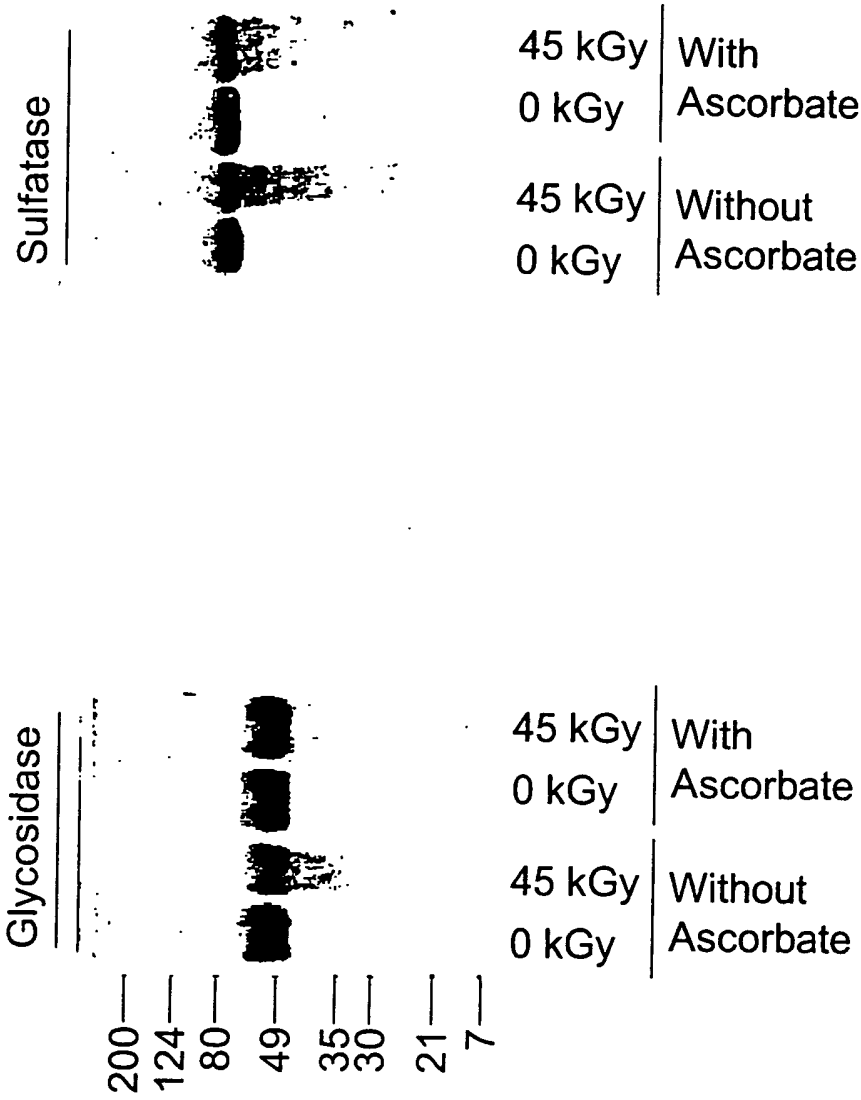


FIG. 48

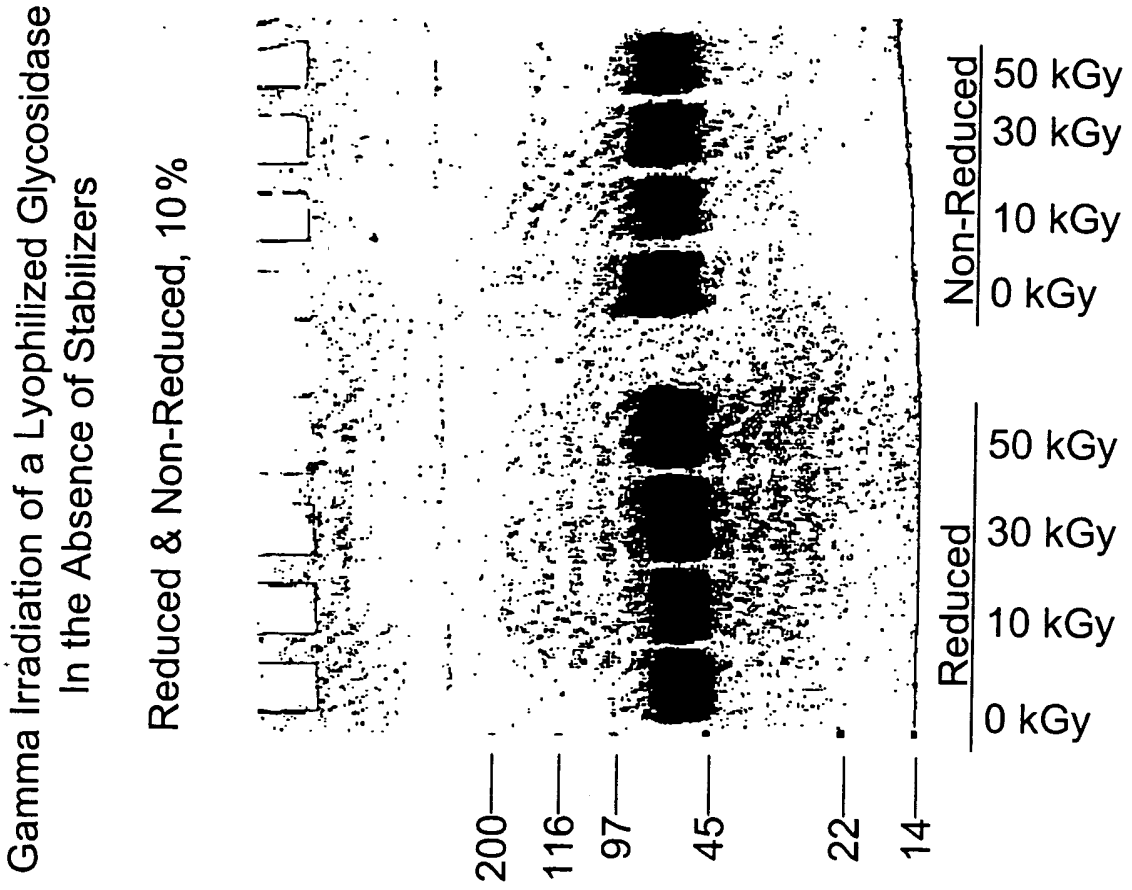


FIG. 49A

Gamma Irradiation of a Lyophilized Glycosidase
In the Presence of 200 mM Ascorbate

Reduced & Non-Reduced, 10%

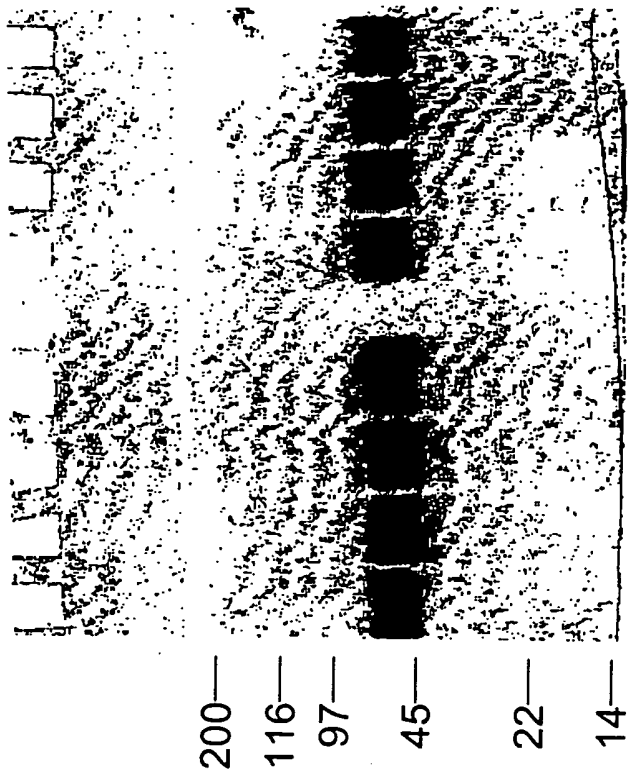


FIG. 49B

Gamma Irradiation of a Lyophilized Glycosidase
In the Presence of 200 mM Ascorbate and 200 mM Gly Gly

Reduced & Non-Reduced, 10%

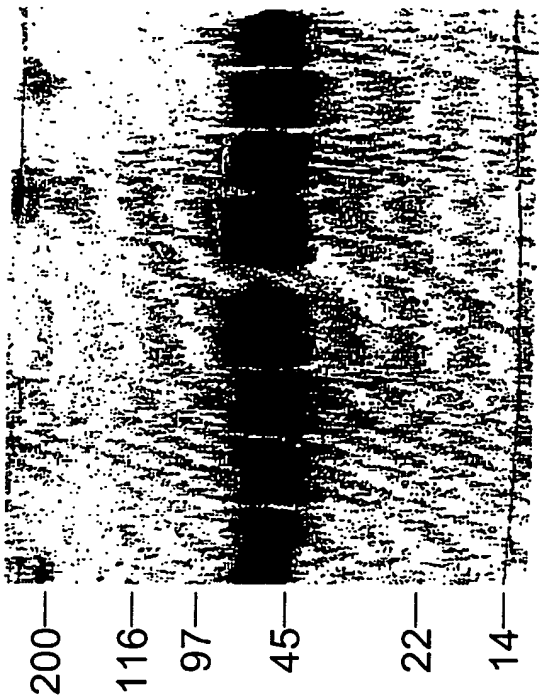


FIG. 49C